

## Supplementary Online Content

Kazda L, Bell K, Thomas R, McGeechan K, Sims R, Barratt A. Overdiagnosis of attention-deficit/hyperactivity disorder in children and adolescents: a systematic scoping review. *JAMA Netw Open*. 2021;4(4):e215335. doi:10.1001/jamanetworkopen.2021.5335

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This supplementary material has been provided by the authors to give readers additional information about their work.

## eAppendix 1. MEDLINE Search Strategy

0. Is ADHD overdiagnosed?	1. Is there potential for increased diagnosis?	2. Is diagnosis actually increased?	3. Are additional cases subclinical or low risk?	4. Are additional cases treated?	5.b) Might harms outweigh benefits for treatment?	5.a) Might harms outweigh benefits for diagnosis?
((exp Attention Deficit Disorder with Hyperactivity/ OR adhd.ti. OR hyperkinesis.ti. OR exp Hyperkinesis/ OR Attention Deficit Hyperactivity Disorder.ti. OR Attention Deficit Disorder with Hyperactivity.ti. OR Hyperkinetic Disorder.ti.)						
AND						
(Child*.tw. OR Child/ OR Adolescen*.tw. OR exp Adolescent/ OR exp Infant/ OR Infan*.tw. OR Minors/ OR p?ediatric*.tw. OR Pediatrics/ OR primary school*.tw. OR school*.tw. OR kindergarten.tw. OR pre-school.tw. OR Pre School.tw. OR elementary school.tw. OR student*.tw. OR secondary school.tw. OR Schools/ OR high school*.tw. OR Child Psychiatry/ OR Adolescent Psychiatry/)						
AND						
(overdiagnos*.mp. OR over diagnos*.mp. OR overtest*.mp. OR over test*.mp. OR exp Medical Overuse/ OR overuse*.mp. OR over use*.mp. OR overdetect*.mp. OR over detect*.mp. OR insignificant disease.mp. OR overtreat*.mp. OR over treat*.mp. OR inconsequential disease.mp. OR overmedical*.mp. OR unnecessary procedure*.mp. OR exp Unnecessary Procedures/ OR pseudodisease.mp. OR pseudo disease.mp. OR "too much medicine".mp. OR nondisease.mp. OR non	((continuum OR continual* OR continuous* OR dimension* OR categoric* OR spectrum OR subthreshold OR threshold OR full syndrome OR dichotomous OR linear association OR distribution of symptom* OR full symptom*).tw))	(prevalence/ OR prevalen*.ti. OR incidence/ OR inciden*.ti. OR frequency.ti. OR rate.ti. OR definition*.ti. OR diagnos*.ti. OR Diagnosis/ OR phenotype.ti)	(severity.tw. or impair*.tw. or mild.tw. or moderate.tw. or severe.tw. or extreme.tw. or subclinical.tw. or subthreshold.tw)	(treatment*.ti. or exp Therapeutics/ or medication*.ti. or pharma*.ti. or Pharmaceutical Preparations/ or Ritalin.ti. or exp Methylphenidate/ or Central Nervous System Stimulants/ or stimulant*.ti. or drug*.ti. or therapeutics/ or drug therapy/ or therapeutic*.ti. or Methylphenidate.ti. or psychostimulant*.ti. or Dexmethylphenidate.ti. or Dexmethylphenidate Hydrochloride/ or Atomoxetine*.ti. or Atomoxetine Hydrochloride/ or nonpsychostimulant.ti. or exp Amphetamines/ or amphetamine*.ti. or adderrall.ti or antipsychotic*.ti. or Antipsychotic Agents/)	(label*.mp.))	
	NOT	AND	AND	AND	AND	NOT
	(Autism.ti. OR Autistic.ti. OR exp Autistic Disorder/ OR exp Autism spectrum Disorder/)	(trend*.tw. OR field trial*.tw. OR follow-up studies/ OR follow-up.tw. OR chang*.tw. OR	(prevalence/ OR prevalen*.ti. OR incidence/ OR inciden*.ti. OR frequency.ti. OR	(trend*.ti. OR change*.ti. OR variation*.ti. OR vary*.ti. OR increase*.ti. OR	(Treatment Outcome/ or outcome*.tw. OR consequence*.tw. OR impact*.tw.)	(off-label.tw. OR Open-Label.tw.)
					AND	

disease.mp. OR "false positive*".mp. OR overdefinition*.mp. OR over definition*.mp. OR misdiagnos*.mp. or Diagnostic Errors OR variation of care.mp. OR medicali*.mp. OR Medicalization/))		variation*.tw. OR vary*.tw. OR increas*.tw. OR decreas*.tw. OR pattern*.tw. OR expan*.tw.))	rate.ti. OR trend*.ti. OR change*.ti. OR variation*.ti. OR vary*.ti. OR increase*.ti. OR decrease*.ti. OR pattern*.ti. Or expand*.ti.))	decrease*.ti. OR pattern*.ti. Or expand*.ti. OR overprescri*.ti. OR prescri*.ti. OR underprescri*.ti.))	(Patient Harm/ or harm*.tw. OR Cost-Benefit Analysis/ OR benefit*.tw. OR cost*.tw. OR Risk/ or risk*.tw. or improv*.tw. or positive.tw. or negative.tw. OR worse.tw. or better.tw. OR adverse.tw. OR effect*.tw.)	
					AND	
					((((meta analysis or "systematic review").pt.) OR (Cohort.tw. OR longitud*.tw. OR observation*.tw. OR follow-up.tw. OR registries/ OR longitudinal studies/)))	
NOT						
((autobiography OR bibliography OR biography OR case reports OR comment OR congress OR consensus development conference, nih OR dataset OR dictionary OR directory OR editorial OR expression of concern OR festschrift OR government document OR guideline OR interactive tutorial OR lecture OR legal case OR legislation OR letter OR news OR newspaper article OR patient education handout OR personal narrative OR portrait OR scientific integrity review OR technical report OR video-audio media).mp. OR webcasts.pt.)						
AND						
limit search to (english language and yr="1979 -Current")						

## eAppendix 2. Data Extraction Template

### Study Details

- Author
- Year
- Title
- Study Type
- Study Characteristics
- Main Study Focus
- Study length
- Study Year(s)

### Population Characteristics

- Population size
- Setting/ Data Source
- Population Age
- Population Sex
- Country/ Region

### Miscellaneous

- Funding
- Conflicts of Interest
- Potentially Relevant References

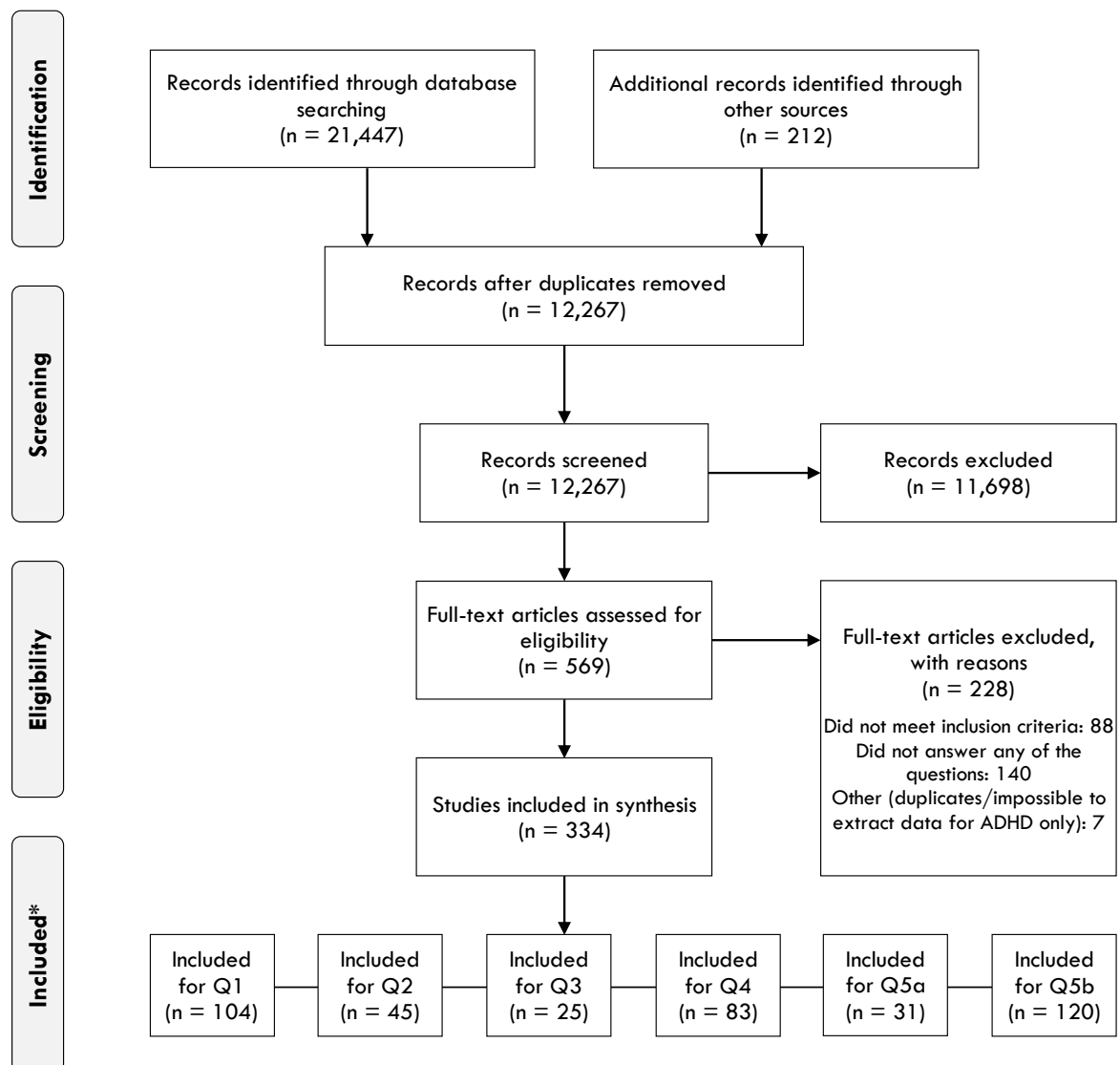
### Question 0-4 specific items

- Main relevant focus
- Other relevant focus
- Outcome(s)
- Measure(s)
- Instrument(s)
- Source(s)
- Effect(s)
- Key relevant finding

### Question 5a/b specific items

- Main relevant focus
- Other relevant focus
- Outcome(s)
- Measure(s)
- Instrument(s)
- Source(s)
- Exposure(s)
- Comparator(s)
- Effect(s)
- Key relevant finding

### eAppendix 3. Flow Diagram of Included Studies



\*It was possible for included studies to supply data for more than one question

Adapted from Moher D, et al (2009) Preferred Reporting Items for Systematic Reviews and MetaAnalyses: The PRISMA Statement<sup>1</sup>

## **eAppendix 4. Qualitative Data Extraction**

### **I. Potential benefits of an ADHD diagnosis**

#### **1. Empowerment through explanation for problems**

##### **a. Increased legitimacy and validation**

###### **Allan et al -2014**

1. Sometimes we can have referrals or children or parents of very affluent people who are looking for reasons for antisocial behaviour that are a disorder [and] therefore explains [the] behaviour but we also have parents with children who are very impoverished and come from impoverished backgrounds emotionally and socioeconomically and you know sometimes that disorder label can increase – well, it increases their benefits. (Professional 10, child mental health)

###### **Damico et al -1995**

1. (21) "He's so much better now. Even when he doesn't do very well, at least we know that there's a reason-even the teachers do. . . . He's not a bad boy . . . or lazy. . . . He has a medical problem. . . . It explains so much! I think back to when he was a baby and then when he was biting kids in preschool-all explained by the ADD. That doctor appointment changed our lives!" [Interview; T.C. 5-26-92]

###### **Klasen -2000**

1. Their immediate reaction was often a sense of great relief. For the first time their definition of the reality of their child's problem had been confirmed by others and thus legitimated
2. being able to name the problem of their child seems to give parents a sense of power and agency. In contemporary society the medical framework, especially the diagnosis, can provide patients and parents with a powerful tool that carries considerable social legitimacy

###### **Moore -2017**

1. Labelling can be helpful, as practitioners often saw a diagnosis as validating problematic behaviour as a medical condition, which assists children and their parents to understand their difficulties and gives further access to support in school. Indeed, one practitioner said 'I think having that diagnosis can help them access other support' (Maisy, SENCo, Primary).

###### **Rogalin et al -2015**

1. the ADHD diagnosis gives struggle a name, an official validation, and it furnishes a sense of comfort with understanding the problem (Danforth and Navarro 2001). In an educational environment this explanation renders the problematic behaviors more reasonable as it gives a socially acceptable meaning to the behaviors as caused by a disorder avoiding that children are in different ways excluded for being just messy kids.

##### **b. Increased understanding, sympathy and reassurance**

###### **Andersson Frondelus et al -2019**

1. In the participants' experiences, being diagnosed essentially meant accommodating their differences in terms of ADHD-related traits. This meant seeing both the good and the bad of

their condition as interrelated parts of themselves, like many others who shared these traits. Seeking acceptance and a sense of normality was important

2. All participants described early, painful memories of being different and feeling frustrated and misunderstood, before being diagnosed.
3. The label provided a name for their condition, which made it easier to explain their difficulties.
4. Parents, siblings, close friends and teachers could understand better and help to cope with difficult situations: "My two closest friends know [about the ADHD diagnosis] and they understand me better."

#### **Carr-Fanning et al -2018**

1. Almost unanimously, parents were adamant that diagnosis was essential. They identified benefits in understanding ADHD in terms of helping to support their child and becoming self-empowered
2. ... I was delighted to get a diagnosis ... because I couldn't understand what was wrong with my son ... I just threw myself into it tried to find out everything ... the empowerment of understanding the condition ... you start to see your child in a completely different light. Instead of the bold child that's ALWAYS getting given out to that their name is 'always' worn out. And you are basically bashing them up...you start to see why ... You start to understand ...you start do things differently ... (mother, son 10 years).

#### **Hamed et al -2015**

1. On the other hand, some individuals have described that the extra attention from their teachers or parents that accompanied the diagnosis of ADHD helped affirm and build confidence (79, 80).

#### **Klasen -2000**

1. Generally, parents thought that seeing the child's problems in medical terms helped them to understand that the behavior was not under the control of the child. Although the nonmedical way of conceptualizing the problem (like "naughty" or "stupid") can lead to critical comments and anger, a medical explanation can help parents to develop their own metaphors in order to reframe the child's behavior in a less blaming way. According to parents, seeing their child as "ill" rather than "bad" leads to increased sympathy and decreased anger
2. Causal beliefs of responsibility for failure promote anger, while causal beliefs of non responsibility promote sympathy.
3. they found it easier to see their child's acts as nondeliberate. According to them, this increased their sympathy for their child and reduced their anger.

#### **Moore -2017**

1. Practitioners recognize the process of labelling occurring for children with ADHD. While the label may aid understanding and access to support, the negative aspects of labelling 'can sometimes just compound them into their difficulties, rather than pull them out' (Ryan, Pastoral Leader, Primary)

#### **Rogalin et al -2015**

1. Behavior becomes reasonable through the diagnosis. Participants describe the behavior of the children by attributing it to its cause: if behavior can be explained through ADHD than it is easier to socially accept these behaviors. Without knowing the "background", the child remains just a messy kid, but if the diagnostic label is assigned to the child his or her actions become

reasonable. The label is powerful as it adds another meaning to the behaviors of the children, both from the peers and the teachers' perspective.

If he would not have had the diagnosis, I don't think that his peers would have accepted him as much as they do now, because now there is an explanation to certain behaviors. (Leisure time teacher and assistant) We know the background (...). Background is important because one gains another understanding of the child. (Teacher)

2. (The diagnosis) is a way for the parents and for others surrounding the child, to know more exactly what this child needs, how to make this child function. (Leisure time teacher) You have to try to possess as much knowledge as possible to be able to be prepared on how to handle behavior. To find a sense of security in ones' own behavior. (Leisure time teacher)
3. Reassurance: As the problematic behaviors are symptoms of ADHD, i.e. symptoms caused by ADHD, the difficulties in school and elsewhere are a consequence of ADHD and not a consequence of lacking skills in parenting or of shortcomings in the educational area. In this way the responsibility of the problems is taken away from parents and education staff, reassuring them of the eligibility of their roles. The diagnostic label guarantees the adequacy of certain actions when relating to the child. In fact, it is felt that being aware of the diagnosis of a specific child, makes it easier to know how to behave in their regard.
4. it reassures professionals involved of their capacities and competences. The responsibility falls on the diagnosis and not on the adults surrounding the child

#### **Wienen et al -2019**

1. Five out of the 30 respondents point out that ADHD classification can bring peace and quiet, or put matters to rest. Respondent 27 described it thus: 'So I think, yeah, the peace of mind for that child, parents sometimes overlook it, but it is there all right.' Likewise, ADHD classification may offer peace of mind to parents too, as respondent 25 observed: 'And you notice that, that as soon as children have a diagnosis and there are new means available at home, ehr. . . yes, like it provides a kind of acceptance of, "oh look, now we know what is the matter. And now we can address it".' This accepting peace of mind also surfaces in contact between parents and the teacher, according to respondent 16: 'No, it gives peace of mind also in discussion with teachers. Like, that's what she is like, so how do we make it fly. Just clarity. And whether, to put it negatively, you really need a label for it, I don't know. As long as you have. . .well no, clarity and peace of mind. And that is better for the child, too. Also in your expectations and your. . . Well yeah, that sometimes you can expect a little more but you need to follow a different route or make things available in a different way.'
2. Sixteen out of 30 teachers mention ADHD classification as explanation of the fact that the teaching approach no longer works in relation to a child, or as confirmation that a particular approach that is already in use is deployed legitimately, that is, with good cause. Respondent 9 noted the lack of certainty that can beset teachers: 'When you notice that the actions that you undertake sort no effect again and again, as I have just described.' Respondent 14 mentioned instances where everything has been tried and has failed: 'When you conclude that you have tried everything but nothing has worked, and then it is really good for the child, but also for you as teacher.'
3. Eleven out of the 30 respondents point out that ADHD classification brings greater empathy. Respondent 5, for example, noted the empathy a teacher has for a pupil: 'I think that it brings a bit of empathy. Or a lot of empathy, which means that you respond quite differently in most cases.'



### **c. Reduced feelings of guilt, blame, fault, failure and anger**

#### **Allan et al -2014**

1. with one possible reason being that some 'mainstream schools perhaps would be quite relieved to have their diagnosis because ... it almost alleviates the blame that they're not doing the right thing' (Professional 6, specialist education).
2. non-diagnosis could come to imply fault.

#### **Carr-Fanning et al -2018**

1. In a similar manner, parents often described elation or relief when they received a diagnosis.
2. Young People (YP) who had not been diagnosed until adolescence described the frustration and repeated experiences of failure and distress prior to receiving a diagnosis, which was often a source of anger and resentment.
3. Parents reported that challenging behaviours were attributed to parenting (e.g. lack of discipline) and/or their child's lack of effort (e.g. 'lazy'), or wilful disobedience (e.g. 'bold brat'): "it was always HER she was the problem so she was constantly being told she was no good"
4. ...some of the teachers I think they're like ADHD doesn't really exist they're just like you're just being bold looking for attention it's not really anything. I'm annoyed by that coz it's not true (female 17 years).

#### **Comstock -2015**

1. Similarly, there are many examples where AD/HD diagnosis gives these individuals a perceived distinct rationalization for various failures in life within these institutions. Important here are the kinds of failures that are attributed to the disorder. These failures are not referenced to any specific category of behavior, not even hyperactive or inattentive behavior, but rather to a troubled way of being. Here are some examples:

"To finally be able, at the age of 39, to put a name to what I was repeatedly told was laziness or sloth is amazing enough. Once I explained that it was the cause of my sloppy work, poor behavior and other things all have noticed, then they could see the changes on meds, and all was fine with them. Why was I different? Why couldn't I cope with things that other people could? Why did I have such a difficult time holding down a job? Why were my finances in a mess? Why was I estranged from my family? Why couldn't I even begin to understand my two son's [sic] even though they acted like me?? "

These individuals frequently see themselves as having failed to manage their resources in order to secure the best possible returns. They represent not a failed venture so much as a non-venture, one that was more unmanaged than mismanaged, outside of a knowledge about authentic self-representation, and therefore doomed from the beginning. A revelation about the biological origins of their problems, and the adopting of an AD/HD identity, is almost always viewed by these individuals as the first step to success.

#### **Damico et al -1995**

1. (5) "He was always labeled as 'lazy' . . . 'not working up to potential,' 'unmotivated' . . . oh, I hate those words-I hate them! There's always a reason for these words and their behaviors-well, do something about it! Don't just say the words! Just find the reason . . . but you can't say that, that wo . . . would reflect on the teaching style . . . that is attacking the teacher. Oh, no!

We are just parents. We don't know anything. . . . It's no wonder we go out outside of the school." [Interview; N.S. 6-14-92]

2. "Bobby and I went to the school for a meeting with her. 'He's bright,' she said, 'but he just doesn't apply himself.' Now, I had enough. 'You ought to get him tested,' I said. 'You have programs here to help his reading and his learning.' She insisted that his problems were not due to any learning difficulties. . . . It was just his lack of motivation. . . . She probably blamed us. In the fourth grade we saw the same things. . . . Poor work from a smart boy. Ray is very good and he tries to please people. . . . It was a problem for him at school, and they just didn't help at all." [Interview; G.H. 6-1-92]
3. This confirmatory reaction has a more subtle implication, one that was expressed by one of the physicians during the interview phase (see example 17): If there is a real problem, medical or biological in nature, then the behaviors and difficulties that the parents have had to address have an explanation. That means that the problems are not due to "character flaws" or "poor parenting" or even "poor teaching" but, rather, to that problem within the child.
4. In effect, as Reid, Maag, and Vasa (1994) have suggested, the child, parents, and teachers are given a "no fault label."

#### **Klasen -2000**

1. Knowing that their child's troubles could be due to an illness often helped parents to stop internalizing the problem as their own failure, weakness, or imagination.
2. The great majority of parents, however, felt that their child had already been labeled by his or her environment before getting a medical diagnosis. They regarded the nonmedical labels such as "stupid," "lazy," and "naughty" as even more damaging than medical ones for the child and for the family because such terms produced feelings of guilt and low self-esteem

#### **Wienen et al -2019**

1. respondent 20 mentions the same as an advantage for parents: 'I think it is a relief for parents, that they really, that you can explain the behaviour. . .and that you know like, well this could be because of the ADHD. I think that is rather nice for parents.'
2. Five out of the 30 respondents point out that an ADHD classification leads to the removal of guilt or blame. This removal involves different actors, according to the teachers. It concerns removal of guilt or blame from the child, from the parent(s) and also removal of guilt or blame from the teacher by the parent(s). The latter may be the case if the parent(s) initially perceive the notable behaviour of the child to be the consequence of the teacher's ways of doing. Respondent 16 talked about the removal of guilt or blame from the child: 'I sometimes think that acknowledgement, for the child. . .you are not to blame, you just have it.' Respondent 22 put it more generally: 'I think that once parents know that my child has ADHD, it may perhaps remove a bit of uncertainty, like well, he's got it, he is like that, nothing we can do about that.' And finally, respondent 12 claimed that teachers are quickly blamed in cases where children are without ADHD classification but show disruptive behaviour: 'which makes that parents say, "well, the teacher is to blame"'.
3. A large number of teachers report, in the interviews we have taken with them, that ADHD classification brings, in particular, a new shared starting point in the dialogue between parents and teachers about educating children. This new starting point can arise because an ADHD classification removes blame and guilt from all of teachers, parents and pupils: the notable behaviour is entirely attributed to 'the disorder' (Broomhead 2013; Moore et al. 2017; Rogalin and Nencini 2015), despite this being a product of questionable science and faulty

reasoning. This shared 'new beginning' creates new room for mutual understanding between parents and teachers and obviates the need for blaming one another for the behaviour perceived in the child. The availability of ADHD classification thereby offers a supposedly independent or external validation of the conclusion that 'something is the matter' with the child so that parents and teachers can start a new working relationship free from guilt and blame – in shared innocence, as it were.

## **2. Empowerment through increased control**

### **a. Reduced uncertainty leads to reclaiming of identity/ feelings of belonging**

#### **Andersson Frondelius et al -2019**

1. In their view, normality was related to self-respect and to identification with the ADHD population.
2. the adolescents' experiences of being diagnosed with ADHD essentially meant a process towards understanding their traits as both 'odd' and 'unique', and realising how common their problems were.
3. Several participants described being proud of their diagnosis; identifying with and admiring certain people with ADHD. This finding may reflect the adolescents' desire to feel that they belong,...

#### **Comstock -2015**

1. One can see here that although AD/HD causes a misdirection of (unmanaged) energies, claiming the disorder as an identity ("My goal with ADD ...") allows the individual to positively manage these energies.
2. As we can see in this passage, the diagnosis of AD/HD (self or otherwise) is usually depicted as the defining moment by which the observing self takes over the disorganized, unobservant self: I've yet to receive [sic] an official diagnosis, but I'm meeting with a Psychiatrist this Friday to hopefully get both confirmation for that which I firmly believe to be the reason for so many of my unexplained tendencies/behaviors [sic], and to get on track with treating this ever-increasing burden [sic] that is living with myself and my mind.

Significantly here, it is because of the fact that the individual cannot make meaning of his or her behaviors—not because he or she is troubled by behaviors considered deviant or abnormal—that the individual believes something is wrong. This individual's "unexplained tendencies/behaviors," it is asserted, will finally be explained with an official diagnosis that will serve as the principle by which the one self makes meaning of the other self, in short, as an identity. Diagnosis becomes the moment that the previously troubled individual confirms a new identity within and on the side of a knowledge about the proper way to live and the truth about human nature (for this reason genetics, and speculating on the AD/HD of family members, is a frequent theme in the posts).

3. For these individuals, the AD/HD identity is rooted in and at every point related to the knowledge that individuals are "naturally" self enterprising and self-interested. And in adopting the AD/HD identity, they position themselves firmly on the side of truth and knowledge. This turning to the hard truth of biology is consistently evident in these posts, especially in the frequent metaphorical construction of AD/HD diagnosis and treatment as a kind of "salvation." These terms of spiritual awakening appear frequently.

#### **Klasen -2000**

1. They realized that they were not alone with their problem, and the chaos of different pressures and disturbing observations and experiences started to be restructured and framed in terms of the disorder.

#### **a. Increased self-esteem and confidence**

##### **Andersson Frondelius et al -2019**

1. Being diagnosed with ADHD meant to recognise some traits as positive and even appreciate them as a gift, feeling special and unique compared with most people.
2. While developing an understanding of the complexity of ADHD and its commonness, the participants gained confidence and a sense of dignity.

##### **Hamed et al -2015**

1. On the other hand, some individuals have described that the extra attention from their teachers or parents that accompanied the diagnosis of ADHD helped affirm and build confidence (79, 80).
2. Individuals diagnosed late reported low self-esteem and underachievement due to repetitive experiences of failure during childhood (80).

##### **Klasen -2000**

1. Having a diagnosis provided some parents with the confidence to face clinical, social, and school services and request the help that they or their child needed.

#### **b. Expectation of solution**

##### **Andersson Frondelius et al -2019**

1. With the diagnostic label as a door opener, the participants expected that their problems would be reduced or disappear. They hoped to finally calm down, to be able to focus and perform successfully.
2. The adolescents in this study put substantial hope for change in being diagnosed. The diagnosis was expected to change their life, but their hope was not always fulfilled.

##### **Damico et al -1995**

1. This second institutional contact was usually much more successful from the perspective of the parents. They believed that their children's problems had finally been addressed.
2. a parent expressed satisfaction with the medical diagnosis and the opinion that the problem should be solved by medical intervention. The views expressed in this excerpt were fairly typical: (14) "Well, now that she's diagnosed and on medication, the problems should vanish. We now know that the problems were inside her brain. The doctor said that her brain is like a switchboard that can't receive and handle all the calls because it's too easily distracted. With the medication, that's changed. I don't know how the teachers could help her more . . . maybe work on her learning problems?" [Interview; Q.A. 9-24921]

##### **Klasen -2000**

1. Even though a diagnosis also brought some ambivalent feelings for some parents, it generally was seen as a constructive step forward in dealing with the serious problems of raising a hyperactive child.

2. Receiving the diagnosis gave parents hope that the situation could improve. Armed with an explanation for their child's problems that did not imply their own guilt, many felt more in control of the circumstances of their lives and more able to work out ways of understanding and solving their problems. Having a diagnosis provided some parents with the confidence to face clinical, social, and school services and request the help that they or their child needed.
3. In general, parents were activated by the diagnosis. They found materials on hyperactivity, joined self-help groups, tried new parenting techniques, and seemed more hopeful.

#### **Wienen et al -2019**

1. Eight out of the 30 respondents note that an ADHD classification leads to a 'new' shared starting point in the collaboration between parents and teachers. Respondent 27 described it as follows: 'While with those parents whose child has been diagnosed there is often also a solution, medication or support, in any case, something that you can bat about. In those cases it becomes more of a collaborative little project I think, through which you can help the child.' Respondent 5 also talked about the shared perspective that emerges following classification: 'Sure, a clearer picture really, also clear towards parents. . .and then you do need to point all noses in the same direction, so to say. And when that is all sorted you can say, okay, what do we now need.'

### **3. Enablement to support**

#### **a. Increased ability to seek, receive and accept support**

##### **Comstock -2015**

1. Many individuals similarly embrace the AD/HD identity in more or less enthusiastic terms, based on the benefits they expect to see at work, school, in domestic relationships (indeed, most posts touch on at least one of these three institutions).

##### **Klasen -2000**

1. Having a diagnosis provided some parents with the confidence to face clinical, social, and school services and request the help that they or their child needed.
2. After the diagnosis the thought of having to learn special strategies to deal with her hyperactive child was much less threatening

##### **Moore -2017**

1. Labelling can be helpful, as practitioners often saw a diagnosis as validating problematic behaviour as a medical condition, which assists children and their parents to understand their difficulties and gives further access to support in school. Indeed, one practitioner said 'I think having that diagnosis can help them access other support" (Maisy, SENCo, Primary).
2. Practitioners recognize the process of labelling occurring for children with ADHD. While the label may aid understanding and access to support, the negative aspects of labelling 'can sometimes just compound them into their difficulties, rather than pull them out' (Ryan, Pastoral Leader, Primary)

#### **Wienen et al -2019**

1. A large number of teachers report, in the interviews we have taken with them, that ADHD classification brings, in particular, a new shared starting point in the dialogue between parents and teachers about educating children. This new starting point can arise because an ADHD classification removes blame and guilt from all of teachers, parents and pupils: the notable

behaviour is entirely attributed to 'the disorder' (Broomhead 2013; Moore et al. 2017; Rogalin and Nencini 2015), despite this being a product of questionable science and faulty reasoning. This shared 'new beginning' creates new room for mutual understanding between parents and teachers and obviates the need for blaming one another for the behaviour perceived in the child. The availability of ADHD classification thereby offers a supposedly independent or external validation of the conclusion that 'something is the matter' with the child so that parents and teachers can start a new working relationship free from guilt and blame – in shared innocence, as it were.

## **b. Educational support**

### **Damico et al -1995**

1. Once the diagnosis was completed and the label was received, several additional events took place. In thirteen of the fourteen cases, physicians or psychologists recommended medication. In eleven of the thirteen cases, this recommendation was accepted by the parents. The other primary result of the label was that the parents returned to the schools with a diagnosis of ADHD in hand. In eight of the fourteen cases, the schools reacted immediately to the label and provided some services or accommodations for the students. In the other six cases, the schools were uncooperative, but eventually relented and provided some services or accommodations in five instances.
2. Services or accommodations that had not been previously provided were now made available. This occurred in thirteen of the fourteen cases. The following comment from a regular classroom teacher demonstrates this tendency for acquiescence: (10) "I have so many parents that are concerned. Whoever thinks that parents aren't concerned don't work in this school. So I get a lot of complaints and requests for more work or more help. I can't give it all. Now, you give me a medical diagnosis, something on paper and based on medical science, now that will get my attention." [Interview; K.B. 8-5-92]
3. When the formal label was delivered to the schools, the documentation of the disability label acted as a catalyst for actions requested earlier by the parents. Usually, evaluations, accommodations, and services not previously offered to the child and parents were now provided. The label, therefore, had a reactive power over the schools, the parents, and even the children. Perhaps this is a primary reason for the rapid growth of ADHD as a disability label over the last several years. Parents are increasingly recognizing that the concerns they express to the schools are not taken seriously until a disability label is assigned.

### **Rogalin et al -2015**

1. If a child does not have a diagnosis but does behave like a child with ADHD, the same resources will not be given, this child will become just a rowdy kid, he might get detention, maybe he will be taken away from the class, but the discussion will not be concerning the fact that this child needs help/ assistance. (Leisure time teacher and assistant)
2. To see behaviours as symptoms of a disorder rather than unreasonable and unexplainable actions changes the interventions that are made in regards to the children. Assistance and support are the main focus in the presence of a diagnosis whereas detention and expulsion from the classroom are more likely if the child does not have a diagnosis.

### **Wienen et al -2019**

1. Eleven out of the 30 teachers point out that an ADHD classification leads to new approaches, ideas, medication and right to support. As respondent 4 noted, 'So in order to better support these children by way of an assistant or whatever kind of effort, we need a diagnosis'. Some

teachers, including respondent 25, point out that new ideas and pointers may arise: 'Yes, just purely those practical things like, how can I help the child. Also, because, especially for the child to find his or her own way in that.'

2. Eight out of the 30 respondents note that an ADHD classification leads to a 'new' shared starting point in the collaboration between parents and teachers. Respondent 27 described it as follows: 'While with those parents whose child has been diagnosed there is often also a solution, medication or support, in any case, something that you can bat about. In those cases it becomes more of a collaborative little project I think, through which you can help the child.' Respondent 5 also talked about the shared perspective that emerges following classification: 'Sure, a clearer picture really, also clear towards parents. . .and then you do need to point all noses in the same direction, so to say. And when that is all sorted you can say, okay, what do we now need.'

### **c. Financial support**

#### **Allan et al -2014**

1. Sometimes we can have referrals or children or parents of very affluent people who are looking for reasons for antisocial behaviour that are a disorder [and] therefore explains [the] behaviour but we also have parents with children who are very impoverished and come from impoverished backgrounds emotionally and socioeconomically and you know sometimes that disorder label can increase – well, it increases their benefits. (Professional 10, child mental health)
2. This pursuit of diagnosis by impoverished people, driven by economic need, highlights the problems that can be caused by the medicalisation of poverty (Schram 2000).

### **d. Medical/ psychological support**

#### **Carr-Fanning et al -2018**

1. Parents described how delayed diagnosis resulted in significant consequences and secondary problems, which led to the diagnosis. For example, a mother described her daughter's (17 years) overdose at the age of 13 years as a cry for help.

#### **Damico et al -1995**

1. Once the diagnosis was completed and the label was received, several additional events took place. In thirteen of the fourteen cases, physicians or psychologists recommended medication. In eleven of the thirteen cases, this recommendation was accepted by the parents. The other primary result of the label was that the parents returned to the schools with a diagnosis of ADHD in hand. In eight of the fourteen cases, the schools reacted immediately to the label and provided some services or accommodations for the students. In the other six cases, the schools were uncooperative, but eventually relented and provided some services or accommodations in five instances
2. A parent expressed satisfaction with the medical diagnosis and the opinion that the problem should be solved by medical intervention. The views expressed in this excerpt were fairly typical: (14) "Well, now that she's diagnosed and on medication, the problems should vanish. We now know that the problems were inside her brain. The doctor said that her brain is like a switchboard that can't receive and handle all the calls because it's too easily distracted. With the medication, that's changed. I don't know how the teachers could help her more...maybe work on her learning problems?" [Interview; Q.A. 9-24921]

### **Hamed et al -2015**

1. One of the major consequences of ADHD not being diagnosed is a lack of treatment. Untreated ADHD can pose a tremendous amount of psychological, financial, academic, and social burden to the individual and the community, which reflects the importance of diagnosing and treating the disorder (23, 66). While treatment has not been shown to completely “normalize” the developmental trajectory of individuals with ADHD, individuals with ADHD who do not receive treatment have poorer long-term outcomes compared to those that are treated (51). Untreated ADHD during childhood is a risk factor for later adult mental health issues, which extend beyond impairment in academics (66). A lack of treatment for ADHD also impairs social and occupational functioning and increases the likelihood of developing comorbid disorders like anxiety, depression, personality disorders, antisocial behaviours, and SUD (66, 67). Many mechanisms may be at work linking undiagnosed ADHD to vulnerabilities (27).
2. The prevalence of undiagnosed ADHD within a substance treatment population was approximately fivefold higher than the general population (66) suggesting that undiagnosed ADHD may have substance abuse requiring treatment as a consequence.
3. Also, as reviewed previously, the MRRs of individuals with delayed diagnosis of ADHD has been shown to be significantly higher than those diagnosed earlier, suggesting that a lack of diagnosis may accumulate risks to mortality (78).

### **Malacrida –2004**

1. Many mothers reported being sent for interventions even though a label was not provided. They described multiple diagnoses that were vague and often not very helpful, including poor muscle tone, behavior problems and diffuse learning challenges. Almost inevitably, as a first assessment measure, British mothers were sent by educators to see psychiatrists or family therapists to resolve perceived family difficulties, and often these interventions took many years before women stepped ‘outside the box’ to seek an ADHD assessment.

## **II. Potential harms of an ADHD diagnosis**

### **1. Disempowerment through excuse for problems**

#### **a. Decreased responsibility for behaviour, parenting and teaching problems**

### **Damico et al -1995**

1. (11) (Notes from science class. Teacher taking up homework, walking down aisles, and taking it from each student.) Mike's turn comes, he looks at the teacher and says, "I couldn't do it. It took too much time because of my ADD." Teacher frowns and responds, "That's the third time you've told me that. That ADD is no excuse for not doing your work. You can fail just the same." [Field notes on M.N.; 10-21-921]
2. The physicians interviewed for this study did not hold the same beliefs about the objectivity of the diagnosis of ADHD. One physician, a pediatrician, expressed some of her concerns during the interview:
3. (17) "I feel a real burden at times about the whole ADD business. Parents are starting to come to me looking for the diagnosis. They're almost shoppers in search of that label as an explanation or even an excuse . . . and I'm uncomfortable with it. See, it's too easy to look at behaviors and then make a quick judgment of ADD . . . but I'm not certain we're always right.



It's so subjective. . . . And then the parents want medication. I'll tell you, I would never be so eager to medicate my children-not in the same way that so many of these parents are doing."  
[Interview; K.T. 9-10-92]

4. This confirmatory reaction has a more subtle implication, one that was expressed by one of the physicians during the interview phase (see example 17): If there is a real problem, medical or biological in nature, then the behaviors and difficulties that the parents have had to address have an explanation. That means that the problems are not due to "character flaws" or "poor parenting" or even "poor teaching" but, rather, to that problem within the child.
5. In effect, as Reid, Maag, and Vasa (1994) have suggested, the child, parents, and teachers are given a "no fault label".

#### **Hamed et al -2015**

1. Additionally, others have reported feeling that ADHD is viewed by others as a "convenient excuse" for their behavioral problems and they may be labeled as a "problem person" rather than a person who has a problem (79, 80)

#### **Malacrida -2004**

1. Mothers were told things like, 'oh, you don't want that [the diagnosis] to go on his record', or, 'if we label him, it will follow him wherever he goes' or quite simply that 'ADHD is just a label to excuse bad behaviour, and it won't be doing him any favours if we just slap a label on him'.

#### **Moore -2017**

1. Practitioners gave examples of how the ADHD label can be used as an excuse by students in the classroom:

Sam came in last year when he was what, 9 or 10, said 'it's alright I don't have to do that I've got ADHD' (Kate, Teaching Assistant, Primary).

And this may be encouraged at home: You do find that with the families ... it's an excuse, then the family come in and 'he's got ADHD so that it explains it all' and it's kinda like no it don't really explain it all there's more to it than just a label (Monica, Teacher, PRU).

Participants saw that the diagnosis removes blame from the child, 'almost validates the behaviour and gives them a reason for it' (Paula, Teacher, PRU); placing the responsibility for behaviour elsewhere was not seen as entirely helpful

#### **Singh -2011**

1. Playing up the stigma of ADHD diagnosis is a double-edged sword: when used for prosocial ends it is a positive form of agency; when used for selfish ends, it ultimately diminishes agency. UK children report exploiting their ADHD diagnosis, primarily as an excuse for bad behavior:

I don't get punished for nothing. It's easy to get away after fights because I have ADHD. I just make puppy eyes and it gets me round everything with my teachers. Alan, age 10

Unlike US children, who rarely admit to using ADHD as an excuse for their behavior (because they believe it is wrong, but also because niche dynamics strongly encourage them to keep their diagnosis a secret), almost all UK children say they have used ADHD as an excuse. Frequently, it works, at least to a degree.

2. Children report that school personnel tell other children to stay away from them because they have ADHD, and they give lesser punishments to students with ADHD diagnoses.

3. the more ADHD is socially available as an excuse for behaviors, the less control a child with ADHD has over how he is seen, and indeed, how he sees himself. Even well-meaning friends threaten a child's capacity for self-determination when they use ADHD as an excuse on his behalf. Exploiting ADHD fuels the short fuse stereotype

**b. Increased deflection from underlying social, systemic or individual problems**

**Allan et al -2014**

1. ...profound consequences of medicalisation is that it can obscure other interpretations for understanding the behaviour of children from disadvantaged communities who are at greater risk of being medicalised
2. The danger is that the problem becomes one of engagement with this classed-medicalised striation and in so doing risks missing other ways of conceptualising the issues involved with child behaviour problems. This brings to mind Schram's (2000) critique of the medicalisation of welfare. In Schram's view, 'poverty can be an important cause of psychological problems, but correcting those psychological conditions will not necessarily correct the poverty that produced those conditions in the first place' (Schram 2000, 92). In a similar manner, we contend that applying diagnoses to school and classroom-based problems does not correct the causes either.
3. This pursuit of diagnosis by impoverished people, driven by economic need, highlights the problems that can be caused by the medicalisation of poverty (Schram 2000).
4. the extent to which child behaviour is territorialised renders it difficult for other contexts and explanations to be pursued. In a territorialised landscape, the child behaviour assemblage might be seen in a bipolar way where non-diagnosis could come to imply fault.

**Damico et al -1995**

1. Because of the medical model, we are too often willing to localize academic and behavioral problems solely within the individual child rather than looking for contributing factors in the larger contexts of the child's experience.
2. This societal bias can lead the clinician to decontextualize observed behaviors and attempt to locate the deficits or difficulties within the child's cognitive or neurological system rather than to consider the complex array of variables and behaviors that make up the child's social, educational, and learning contexts.

**Klasen -2000**

1. The label just distracts from the issue, externalizes the problem. It does not particularly empower the child but tends to disempower it.
2. The danger is that the children might be labeled forever, even if they are not hyperactive. Maybe they have a different problem, like learning disability, which might be less socially acceptable.

**c. No meaningful benefit from diagnosis/ no change apart from label**

**Andersson Frondelius et al -2019**

1. The adolescents in this study put substantial hope for change in being diagnosed. The diagnosis was expected to change their life, but their hope was not always fulfilled.

**Hamed et al -2015**

1. Despite struggles related to ADHD symptoms, receiving the diagnosis does not always reduce stress for an individual.

#### **Malacrida –2004**

1. In her story, and indeed in others like it, educational specialists, administrators and sometimes even teachers, despite medical and psychiatric assessments of ADHD, remained firmly unconvinced of the medicalized status of ADHD, thus making the administration of any kind of non-disciplinary treatment, including medication, problematic for diagnosed children.
2. Repeatedly mothers in both Canada and the UK expressed dismay that teachers seemed reluctant to 'own' the ADD/ADHD problem; they complained that teachers seemingly had little understanding and little interest in understanding or responding to their children's conditions, particularly once the label had been applied and treatment had been prescribed.

#### **Moore -2017**

1. However, participants noted that a diagnosis alone is 'Not a wand that can be waved' (Maisy, SENCo, Primary)

#### **Wienen et al -2019**

1. 'You may have that label, but in effect, absolutely nothing at all has in fact been changed'. Likewise, respondent 1 commented as follows: 'So, suppose a teacher finds that troublesome. So they want to stick a label on it. Because that tells them what to do. While I then think, really, the label tells me nothing more and nothing less.'
2. Ten out of 30 teachers in the data set suggest that an ADHD classification offers no real benefits for educational practice. An example of this is respondent 1: 'I do try to translate it into an educational need, and a label achieves nothing more in those cases. Because you are still, even if a child has a label ADHD, what do you need from me?' Respondent 13 voiced similar concerns: 'But moreover I think, so the child now has a label, so what? I mean, I knew that already, surely? What adjustments do I need to make for him, and I don't think he'll be feeling any better just because there's a label on it.'
3. Two out of the 30 respondents point out the misunderstanding that an ADHD classification ensures that financial means flow to the school. As respondent 4 put it: 'you used to just be able to get money with a label. . .but that is no longer the case now.'

## **2. Disempowerment through loss of control**

### **a. Diagnosis as first step to behaviour correction, control and manipulation by others**

#### **Comstock -2015**

1. It is clear from these posts, however, that AD/HD is still sometimes, if not frequently, used as a form of overt behavior control and correction and that AD/HD is not always a positive identity for individuals but a label given to the powerless (such as children) by those with power (such as parents), from the "top down."

#### **Damico et al -1995**

1. the physicians are way too willing to label a child as ADD and then medicate them. Some teachers aren't much better. They see what Ritalin did to another kid-only focusing on the kid's disruptive behavior-but they like it . . . it makes the classroom calmer so they recommend

medication-they can even suggest the doctor to see. Everyone knows who really pushes the drugs." [Interview; K.N. 9-13-92]

2. Each stated that he or she wasn't certain that the medication benefitted the child's learning capabilities, but that it did make the classroom a better place for the other children to learn.

#### **Hamed et al -2015**

1. Some perceived their identity was challenged by a diagnosis of ADHD and also felt less in-control of their lives, especially when faced with the prospect of taking medication for life (32).

#### **Malacrida –2004**

1. researchers have speculated that the inability to exercise discipline through student exclusion has led US educators to embrace ADD as a medical category and to use Ritalin as a 'substitute' for educational discipline strategies (Kiger, 1985). There is some support for this argument in the stories mothers tell about their children in this study. Canadian mothers, whose children were far less likely to have been suspended or expelled from school than the British children in the study, reported a far higher level of acceptance by educators of drug therapy than was evidenced by British educators. In part, this may stem from the relative lack of alternatives available to Canadian educators than their British counterparts in exercising classroom discipline.

#### **b. Increased passiveness and hopelessness**

##### **Klasen -2000**

1. Like parents of children with other chronic problems, some parents initially reacted with grief, denial, frustration, or anger. "I found it very hard to accept the diagnosis because it means there is something wrong with him that you have to accept and for which there is no cure. Before I thought it was something that could be fixed. I want him to be well adjusted, I want him to be in a mainstream school, I want him to be happy. You have no idea how it hurts; it just takes my life out. I want him to lead a normal life. I suffer because he suffers. It was a shock to accept that your child has a problem and there is something wrong with him. . . . I was upset, but it was a relief as well to know it wasn't down to me, to things I had been doing or not been doing."
2. Despite these mainly positive comments, however, parents emphasized that the diagnosis was also problematic: it made them realize that they would have to live with a chronically difficult child.
3. The GPs also seemed to think that once people see their problems as medical, they stop working toward improvement. Thus, the doctors' decision to withhold a medical label seems to have been based on the fear that the diagnosis would decrease the children's chances of recovery.
4. fear that medicalization can be disabling, making patients passive and dependent

##### **Moore -2017**

1. Practitioners recognize the process of labelling occurring for children with ADHD. While the label may aid understanding and access to support, the negative aspects of labelling 'can sometimes just compound them into their difficulties, rather than pull them out' (Ryan, Pastoral Leader, Primary)

##### **Wienen et al -2019**

1. Respondent 22 put it more generally: 'I think that once parents know that my child has ADHD, it may perhaps remove a bit of uncertainty, like well, he's got it, he is like that, nothing we can do about that.'

**c. Self-fulfilling prophecy: perceived inability to change or achieve (by self or others) leads to exclusion and reduced opportunities**

**Klasen -2000**

1. Their other fear was that the child might overidentify with the diagnosis, so that the problem would turn into a self-fulfilling prophecy.
2. Generally, these doctors were very aware of the dangers of medicalization, which they frequently expressed in sociological terms. "I don't want to stigmatize a child unless it has some benefit. The danger is you are medicalizing something that perhaps should not be medicalized. One of the problems is that one might create a self-fulfilling prophecy."

**Rogalin et al -2015**

1. Participants show awareness of the risks that assigning the psychiatric diagnosis might limit the possibilities of the children's identity. As they report, the diagnosis becomes an obstacle to change as it invites the education staff to place the children with ADHD in the prototypical box. The children are no longer seen as potentially able but with some particular difficulties but rather as children who they know in advance are unable. In other words, if the child has a disorder, than it is natural that he or she is unable to do certain things.
2. The diagnosis becomes hard to get rid of, just like a criminal record, a label that informs others of who the child has been and still is. I think you can get a little "locked" in a certain idea of the child. (Leisure time teacher) If you do not have a diagnosis, one can say: ok, this child has some difficulties with this and this so let us help him with these things. If you have a diagnosis then they are not able to learn this and that, because they have this diagnosis and then they have these difficulties. (Leisure time teacher) It feels like a criminal record, you always have that label that you have committed that crime or that you always have had ADHD. (Teacher)
3. The diagnosed child is the one that is unable to do something, that lacks in abilities. This use of the diagnostic label recalls the reality of a handicap, of a person being unable to do something.
4. Because the diagnosis establishes that a child presents certain behaviors and not others, it lays the ground for the construction of a prototype constituted by expectations on the abilities and behaviors of who has been assigned the diagnosis. When a person is seen by others through the prototype- lenses it will also have impact on what actions are retained as adequate when interacting with the person under consideration (Gergen 1997a, b, 1999, 2009; Gergen and Gergen 1993). Much like the expression "anticipated others" (Goffman 1963,p. 12) indicates, the prototype consents anticipation of future behaviors and precautions can thus be made even before behaviors occur in order to avoid situations experienced as critical. Consequently, if someone is expected not to perform well at certain tasks or in certain academic or occupational areas (APA 2000) the person under consideration might be excluded from these tasks and areas in advance
5. As hypothesized by other authors (e.g. Levine 1997) a diagnostic label promotes the search and confirmation of similarities. It is precisely for this reason that it becomes important to possess as much knowledge as possible about a diagnosis. It becomes important because the knowledge is not neutral, it explains why the children with the diagnosis behave as they do and it helps to know what to do when these children react or say something and even how to

intervene in advance in terms of precaution avoiding that anticipated unwanted situations occur. As a consequence, the identity of a child that has been assigned a diagnostic label is limited. Who the children are and what they can or cannot do depend, at least in part, of the opportunities that are given to them. If certain tasks/situations are avoided for the children with the diagnosis they are excluded from the opportunity to be able in those tasks/situations and on the contrary certain inabilities will become a part of their identity as they are interpreted as an outcome of the diagnosis thus as a natural part of who they are.

6. With the knowledge of a child having a diagnosis however, efforts to improve abilities or change the ways in which a child relate to a peer might still be made but it becomes easy to write off an inability to solve a task or fighting with a peer as a symptom of the disorder and therefore leave it to be. After all, if the children's behaviors are caused by a disorder, than it is only natural that they are unable to do certain things and that they behave in a certain way

### **3. Stigmatisation through permanent label/ identity**

#### **a. Creates an identity which enhances prejudice, stereotypes, judgement**

##### **Andersson Frondelius et al -2019**

1. The participants described that the label 'ADHD' could mean different things, depending on the context. It could be used as a condescending stamp, but it was also a facilitator to professional help.

##### **DosReis et al -2010**

1. Another concern was that as a consequence of being labeled, their child would be treated differently or not given the same opportunities as their peers.

##### **Hamed et al -2015**

1. Some individuals have described perceiving a certain degree of stigma attached to being diagnosed with ADHD, influencing their willingness to disclose their diagnosis to other people.
2. At times, ADHD diagnosis led young people to feel hurt by their peers when they were teased or targeted because of their apparent academic delay and labeled as "retarded" (79).

##### **Klasen -2000**

1. A small number of parents feared that the label might bring disadvantages for their child. They were particularly worried about the stigma attached, which might lead to problems at school.
2. Generally, these doctors were very aware of the dangers of medicalization, which they frequently expressed in sociological terms. "I don't want to stigmatize a child unless it has some benefit. The danger is you are medicalizing something that perhaps should not be medicalized. One of the problems is that one might create a self-fulfilling prophecy."
3. A label can be very frustrating as it makes the kid stand out. It can also lead to scapegoating by increasing the conflict between parent and child.

##### **Moore -2017**

1. In the current study, some practitioners 'don't think it's nice to have that [ADHD] label' (Bryony, SENCo, PRU) because 'so many people are ... stigmatized by these sorts of things' (Tarquin, Teacher, PRU). One participant pointed out that other learning difficulties like dyslexia are more 'socially acceptable' (Janet, Teacher, Secondary) than ADHD.

**Rogalin et al -2015**

1. You don't take it just as any child. There is something that tells you "this is what a child with ADHD is". That they are messy, that they have problems with concentration, loud, that they take up space. That there are going to be problems. (Leisure time teacher)
2. On one hand we have the parts of the accounts that form an idea of a typical ADHD-child with typical behaviors. As a consequence of this idea, certain expectations are placed on the child whose performances and future behaviors are anticipated.
3. Participants show awareness of the risks that assigning the psychiatric diagnosis might limit the possibilities of the children's identity. As they report, the diagnosis becomes an obstacle to change as it invites the education staff to place the children with ADHD in the prototypical box. The children are no longer seen as potentially able but with some particular difficulties but rather as children who they know in advance are unable. In other words, if the child has a disorder, than it is natural that he or she is unable to do certain things.

**Singh -2011**

1. Children report that school personnel tell other children to stay away from them because they have ADHD, and they give lesser punishments to students with ADHD diagnoses.

**Wienen et al -2019**

1. The main disadvantage mentioned is that an ADHD classification bears down on a child for many years.

**b. Increases feelings of isolation, exclusion and shame****Hamed et al -2015**

1. Still other individuals report having the diagnosis of ADHD lead them to feel as though they were different and isolated (79).

**Moore -2017**

1. Another participant spoke of 'the shame' (Bryony, SENCo, PRU) surrounding ADHD and how this can lead students to be reluctant to ask for or accept help.

**Singh -2011**

1. Children report that school personnel tell other children to stay away from them because they have ADHD, and they give lesser punishments to students with ADHD diagnoses.

## eAppendix 5. Critical Appraisal Results

Author	Year	Overall appraisal
Akinbami, L. J.; Liu, X.; Pastor, P. N.; Reuben, C. A.	2011	High Risk of Bias
Akmatov, M. K.; Steffen, A.; Holstiege, J.; Hering, R.; Schulz, M.; Batzing, J.	2018	Low Risk of Bias
Alessi-Severini, S.; Biscontri, R. G.; Collins, D. M.; Sareen, J.; Enns, M. W.	2012	Low Risk of Bias
Allan, J.; Harwood, V.	2014	High Risk of Bias
Anderson, J.	2001	Moderate Risk of Bias
Andersson Frondelius, I.; V. Ranjbar; L. Danielsson	2019	Low Risk of Bias
Angold, A.; Erkanli, A.; Egger, H. L.; Costello, E. J.	2000	Moderate Risk of Bias
Arnold, L. E.; Hodgkins, P.; Caci, H.; Kahle, J.; Young, S.	2015	High Risk of Bias
Atladdottir, H.O.; D. Gyllenberg; A. Langridge; S. Sandin; S. N. Hansen; H. Leonard; M. Gissler; A. Reichenberg; D. E. Schendel; J. Bourke; C. M. Hultman; D. E. Grice; J. D. Buxbaum; E. T. Parner	2015	Moderate Risk of Bias
Bachmann, C. J.; Wijlaars, L. P.; Kalverdijk, L. J.; Burcu, M.; Glaeske, G.; Schuling-Veninga, C. C. M.; Hoffmann, F.; Aagaard, L.; Zito, J. M.	2017	Moderate Risk of Bias
Balazs, J.; Keresztesy, A.	2014	High Risk of Bias
Barbarese, W. J.; Katusic, S. K.; Colligan, R. C.; Weaver, A. L.; Jacobsen, S. J.	2007	High Risk of Bias
Barczyk, Z. A.; J. J. Rucklidge; M. Eggleston; R. T. Mulder	2020	Low Risk of Bias
Barkley, R. A.; Fischer, M.; Smallish, L.; Fletcher, K.	2003	High Risk of Bias
Bastiaens, L.	2011	High Risk of Bias
Batzle, C. S.; Weyandt, L. L.; Janusis, G. M.; DeVietti, T. L.	2010	High Risk of Bias
Baumgaertel, A.; Wolraich, M. L.; Dietrich, M.	1995	Moderate Risk of Bias
Bax, A. C.; Bard, D. E.; Cuffe, S. P.; McKeown, R. E.; Wolraich, M. L.	2019	Moderate Risk of Bias
Beau-Lejdstrom, R.; Douglas, I.; Evans, S. J. W.; Smeeth, L.	2016	Moderate Risk of Bias
Benner-Davis, S.; Heaton, P. C.	2007	High Risk of Bias
Biederman, J.; Fitzgerald, M.; Kirova, A. M.; Woodworth, K. Y.; Biederman, I.; Faraone, S. V.	2018	High Risk of Bias
Biederman, J.; Monuteaux, M. C.; Spencer, T.; Wilens, T. E.; Macpherson, H. A.; Faraone, S. V.	2008	Moderate Risk of Bias
Biederman, J.; Wilens, T.; Mick, E.; Spencer, T.; Faraone, S. V.	1999	High Risk of Bias
Bjerkeli, P. J.; Vicente, R. P.; Mulinari, S.; Johnell, K.; Merlo, J.	2018	Low Risk of Bias
Boland, F.; Galvin, R.; Reulbach, U.; Motterlini, N.; Kelly, D.; Bennett, K.; Fahey, T.	2015	Low Risk of Bias
Boland, H.; M. DiSalvo; R. Fried; K. Y. Woodworth; T. Wilens; S. V. Faraone; J. Biederman	2020	High Risk of Bias



Bonati, M.; Cartabia, M.; Zanetti, M.; Reale, L.; Didoni, A.; Costantino, M. A.; Conte, S.; Renzetti, V.; Salvoni, L.; Molteni, M.; Trabattini, S.; Effedri, P.; Fazzi, E.; Filippini, E.; Pedercini, E.; Zanetti, E.; Fteita, N.; Arisi, D.; Mapelli, R.; Frassica, S.; Oriani, S.; Trevisan, C.; Acquistapace, S.; Martinelli, O.; Villani, D.; Binaghi, E.; Deriu, A.; Vatile, G.; Borchia, A.; Morosini, P.; Breviglieri, M.; Capovilla, G.; Segala, R.; Battaini, C.; Bissoli, C.; Canevini, M. P.; Cropanese, I.; Fornaro, E.; Leonardi, G.; Merati, S.; Saccani, M.; Vaccari, R.; Valenti, V.; Balottin, U.; Chiappedi, M.; Vlacos, E.; Meraviglia, C.; Palmieri, M. G.; Ruffoni, G.; Rinaldi, F.; Soardi, F.; Luoni, C.; Rossi, G.	2018	Low Risk of Bias
Bowling, A.; Davison, K.; Haneuse, S.; Beardslee, W.; Miller, D. P.	2017	Low Risk of Bias
Brault, M. C.; Lacourse, E.	2012	Low Risk of Bias
Brossard-Racine, M.; Shevell, M.; Snider, L.; Belanger, S. A.; Majnemer, A.	2012	High Risk of Bias
Brownell, M. D.; Yogendran, M. S.	2001	Low Risk of Bias
Bruchmuller, K.; Margraf, J.; Schneider, S.	2012	Moderate Risk of Bias
Bruckner, T. A.; Hodgson, A.; Mahoney, C. B.; Fulton, B. D.; Levine, P.; Scheffler, R. M.	2012	Moderate Risk of Bias
Burcu, M.; J. Zito; L. Metcalfe	2016	Moderate Risk of Bias
Butte, N. F.; Treuth, M. S.; Voigt, R. G.; Llorente, A. M.; Heird, W. C.	1999	High Risk of Bias
Carr-Fanning, K.; Mc Guckin, C.	2018	High Risk of Bias
Castle, L.; Aubert, R. E.; Verbrugge, R. R.; Khalid, M.; Epstein, R. S.	2007	Moderate Risk of Bias
Catala-Lopez, F.; Hutton, B.; Nunez-Beltran, A.; Page, M. J.; Ridao, M.; Macias Saint-Gerons, D.; Catala, M. A.; Tabares-Seisdedos, R.; Moher, D.	2017	Low Risk of Bias
Centers for Disease, Control; Prevention	2005	Low Risk of Bias
Centers for Disease, Control; Prevention	2010	Low Risk of Bias
Chai, G.; Governale, L.; McMahon, A. W.; Trinidad, J. P.; Staffa, J.; Murphy, D.	2012	Moderate Risk of Bias
Chang, Z.; Ghirardi, L.; Quinn, P. D.; Asherson, P.; D'Onofrio, B. M.; Larsson, H.	2019	High Risk of Bias
Chang, Z.; P. D. Quinn; L. O'Reilly; A. Sjolander; K. Hur; R. Gibbons; H. Larsson; B. M. D'Onofrio	2019	Low Risk of Bias
Charach, A.; Ickowicz, A.; Schachar, R.	2004	High Risk of Bias
Charles, L.; Schain, R.	1981	High Risk of Bias
Chen, Q.; Sjolander, A.; Runeson, B.; D'Onofrio, B. M.; Lichtenstein, P.; Larsson, H.	2014	Low Risk of Bias
Cheng, J. Y.; Chen, R. Y.; Ko, J. S.; Ng, E. M.	2007	Low Risk of Bias
Chien, I. C.; Lin, C. H.; Chou, Y. J.; Chou, P.	2012	Low Risk of Bias
Ching, C.; Eslick, G. D.; Poulton, A. S.	2019	High Risk of Bias
Chirdkiatgumchai, V.; Xiao, H.; Fredstrom, B. K.; Adams, R. E.; Epstein, J. N.; Shah, S. S.; Brinkman, W. B.; Kahn, R. S.; Froehlich, T. E.	2013	Moderate Risk of Bias

Cho, S. C.; Kim, B. N.; Kim, J. W.; Rohde, L. A.; Hwang, J. W.; Chungh, D. S.; Shin, M. S.; Lyoo, I. K.; Go, B. J.; Lee, S. E.; Kim, H. W.	2009	Low Risk of Bias
Clavenna, A.; Bonati, M.	2014	High Risk of Bias
Coghill, D.	2010	High Risk of Bias
Coghill, D. R.; Banaschewski, T.; Soutullo, C.; Cottingham, M. G.; Zuddas, A.	2017	High Risk of Bias
Coghill, D. R.; Seth, S.; Pedroso, S.; Usala, T.; Currie, J.; Gagliano, A.	2014	High Risk of Bias
Coker, T. R.; Elliott, M. N.; Toomey, S. L.; Schwebel, D. C.; Cuccaro, P.; Emery, S. T.; Davies, S. L.; Visser, S. N.; Schuster, M. A.	2016	Moderate Risk of Bias
Coleman, Daniel; Walker, Janet S.; Lee, Junghee; Friesen, Barbara J.; Squire, Peter N.	2009	High Risk of Bias
Collins, K. P.; Cleary, S. D.	2016	Moderate Risk of Bias
Comstock, Edward	2015	Low Risk of Bias
Connor, D. F.	2002	High Risk of Bias
Cooper, W. O.; L. A. Habel; C. M. Sox; K. A. Chan; P. G. Arbogast; T. C. Cheetham; K. T. Murray; V. P. Quinn; C. M. Stein; S. T. Callahan; B. H. Fireman; F. A. Fish; H. S. Kirshner; A. O'Duffy; F. A. Connell; W. A. Ray	2011	Low Risk of Bias
Cornett-Ruiz, Stacey; Hendricks, Bryan	1993	High Risk of Bias
Cortese, S.; N. Adamo; C. Del Giovane; C. Mohr-Jensen; A. J. Hayes; S. Carucci; L. Z. Atkinson; L. Tessari; T. Banaschewski; D. Coghill; C. Hollis; E. Simonoff; A. Zuddas; C. Barbui; M. Purgato; H. C. Steinhausen; F. Shokrane; J. Xia; A. Cipriani	2018	Moderate Risk of Bias
Cuffe, S. P.; Moore, C. G.; McKeown, R. E.	2005	Moderate Risk of Bias
Currie, J.; Stabile, M.; Jones, L.	2014	Moderate Risk of Bias
Dalsgaard, S.; A. P. Kvist; J. F. Leckman; H. S. Nielsen; M. Simonsen	2014	Low Risk of Bias
Dalsgaard, S.; Leckman, J. F.; Mortensen, P. B.; Nielsen, H. S.; Simonsen, M.	2015	Low Risk of Bias
Dalsgaard, S.; M. K. Humlum; H. S. Nielsen; M. Simonsen	2012	Low Risk of Bias
Dalsgaard, S.; Nielsen, H. S.; Simonsen, M.	2014	Low Risk of Bias
Dalsgaard, S.; Nielsen, H. S.; Simonsen, M.	2013	Low Risk of Bias
Damico, J. S.; Augustine, L. E.	1995	Low Risk of Bias
Danielson, M. L.; Visser, S. N.; Gleason, M. M.; Peacock, G.; Claussen, A. H.; Blumberg, S. J.	2017	Moderate Risk of Bias
Davidovitch, M.; Koren, G.; Fund, N.; Shrem, M.; Porath, A.	2017	Low Risk of Bias
Davies, M.; Coughtrie, A.; Layton, D.; Shakir, S. A.	2017	High Risk of Bias
Davis, D. W.; Feygin, Y.; Creel, L.; Williams, P. G.; Lohr, W. D.; Jones, V. F.; Le, J.; Pasquenza, N.; Ghosal, S.; Jawad, K.; Yan, X.; Liu, G.; McKinley, S.	2019	Low Risk of Bias
Didoni, A.; Sequi, M.; Panei, P.; Bonati, M.	2011	Moderate Risk of Bias
Diez-Suarez, A.; Vallejo-Valdivielso, M.; Marin-Mendez, J. J.; De Castro-Manglano, P.; Soutullo, C. A.	2017	Moderate Risk of Bias

Donfrancesco, R.; Marano, A.; Calderoni, D.; Mugnaini, D.; Thomas, F.; Di Trani, M.; Innocenzi, M.; Vitiello, B.	2015	Moderate Risk of Bias
Dopfner, M.; Breuer, D.; Wille, N.; Erhart, M.; Ravens-Sieberer, U.	2008	Moderate Risk of Bias
DosReis, S.; Barksdale, C. L.; Sherman, A.; Maloney, K.; Charach, A.	2010	High Risk of Bias
Dryer, R.; Kiernan, M. J.; Tyson, G. A.	2006	High Risk of Bias
Elder, T.E.	2010	Moderate Risk of Bias
Ercan, E. S.; Kose, S.; Kutlu, A.; Akyol, O.; Durak, S.; Aydin, C.	2012	High Risk of Bias
Evans, W. N.; Morrill, M. S.; Parente, S. T.	2010	Low Risk of Bias
Fabiano, F; N. Haslam	2020	Moderate Risk of Bias
Fabiano, Gregory A.; Pelham, William E., Jr.; Majumdar, Antara; Evans, Steven W.; Manos, Michael J.; Caserta, Donald; Girio-Herrera, Erin L.; Pisecco, Stewart; Hannah, Jane N.; Carter, Randy L.	2013	High Risk of Bias
Fairman, K.A.; A. M. Peckham; D. A. Sclar	2020	Low Risk of Bias
Faraone, S. V.; Biederman, J.; Morley, C. P.; Spencer, T. J.	2008	High Risk of Bias
Fergusson, D. M.; Lynskey, M. T.; Horwood, L. J.	1997	Low Risk of Bias
Fergusson, David M.; Boden, Joseph M.; Horwood, L.	2010	Low Risk of Bias
Fergusson, David M.; Horwood, L.	1995	Moderate Risk of Bias
Fleming, M.; Fitton, C. A.; Steiner, M. F. C.; McLay, J. S.; Clark, D.; King, A.; Mackay, D. F.; Pell, J. P.	2017	Moderate Risk of Bias
Fogelman, Y.; Vinker, S.; Guy, N.; Kahan, E.	2003	Low Risk of Bias
Foreman, David M.; Ford, Tamsin	2008	Moderate Risk of Bias
Frank, E.; Ozon, C.; Nair, V.; Othee, K.	2015	High Risk of Bias
Froehlich, T. E.; Lanphear, B. P.; Epstein, J. N.; Barbaresi, W. J.; Katusic, S. K.; Kahn, R. S.	2007	Moderate Risk of Bias
Fullerton, C. A.; Epstein, A. M.; Frank, R. G.; Normand, S. L.; Fu, C. X.; McGuire, T. G.	2012	Low Risk of Bias
Fulton, B. D.; Scheffler, R. M.; Hinshaw, S. P.	2015	Moderate Risk of Bias
Furu, K.; Karlstad, O.; Zoega, H.; Martikainen, J. E.; Bahmanyar, S.; Kieler, H.; Pottegard, A.	2017	Low Risk of Bias
Gajria, K.; Lu, M.; Sikirica, V.; Greven, P.; Zhong, Y.; Qin, P.; Xie, J.	2014	High Risk of Bias
Garfield, C. F.; Dorsey, E. R.; Zhu, S.; Huskamp, H. A.; Conti, R.; Dusetzina, S. B.; Higashi, A.; Perrin, J. M.; Kornfield, R.; Alexander, G. C.	2012	Moderate Risk of Bias
Gayleard, J. L.; Mychailyszyn, M. P.	2017	Moderate Risk of Bias
Getahun, D.; Jacobsen, S. J.; Fassett, M. J.; Chen, W.; Demissie, K.; Rhoads, G. G.	2013	Low Risk of Bias
Ghanizadeh, A.	2013	High Risk of Bias
Ghanizadeh, A.; Fallahi, M.; Akhondzadeh, S.	2009	High Risk of Bias
Ghanizadeh, A.; Freeman, R. D.; Berk, M.	2013	High Risk of Bias
Giacobini, M.; Medin, E.; Ahnemark, E.; Russo, L. J.; Carlqvist, P.	2018	Low Risk of Bias

Gibbs, S.; J. F. Beckmann; J. Elliott; R. L. Metsapelto; T. Vehkakoski; M. Aro	2020	High Risk of Bias
Girand, H. L.; S. Litkowicz; M. Sohn	2020	Low Risk of Bias
Goetz, M.; Yeh, C. B.; Ondrejka, I.; Akay, A.; Herczeg, I.; Dobrescu, I.; Kim, B. N.; Jin, X.; Riley, A. W.; Martenyi, F.; Harrison, G.; Treuer, T.	2012	High Risk of Bias
Grimmsmann, T.; W. Himmel	2020	High Risk of Bias
Groenman, A. P.; Oosterlaan, J.; Rommelse, N. N.; Franke, B.; Greven, C. U.; Hoekstra, P. J.; Hartman, C. A.; Luman, M.; Roeyers, H.; Oades, R. D.; Sergeant, J. A.; Buitelaar, J. K.; Faraone, S. V.	2013	High Risk of Bias
Gumy, C.; Huissoud, T.; Dubois-Arber, F.	2010	Low Risk of Bias
Habel, L. A.; Schaefer, C. A.; Levine, P.; Bhat, A. K.; Elliott, G.	2005	Low Risk of Bias
Halldner, Linda; Tillander, Annika; Lundholm, Cecilia; Boman, Marcus; Langstrom, Niklas; Larsson, Henrik; Lichtenstein, Paul	2014	Low Risk of Bias
Hamed, A. M.; Kauer, A. J.; Stevens, H. E.	2015	High Risk of Bias
Harstad, E. B.; Weaver, A. L.; Katusic, S. K.; Colligan, R. C.; Kumar, S.; Chan, E.; Voigt, R. G.; Barbares, W. J.	2014	Moderate Risk of Bias
Haslam, N.; Williams, B.; Prior, M.; Haslam, R.; Graetz, B.; Sawyer, M.	2006	Low Risk of Bias
Havey, J.; Olson, Julie M.; McCormick, Christine; Cates, Gary L.	2005	High Risk of Bias
Hire, A. J.; Ashcroft, D. M.; Springate, D. A.; Steinke, D. T.	2018	Moderate Risk of Bias
Hirota, T.; Schwartz, S.; Correll, C. U.	2014	Moderate Risk of Bias
Hoagwood, K. E.; Kelleher, K.; Zima, B. T.; Perrin, J. M.; Bilder, S.; Crystal, S.	2016	Low Risk of Bias
Hodgkins, P.; Sasane, R.; Meijer, W. M.	2011	Low Risk of Bias
Holden, S. E.; Jenkins-Jones, S.; Poole, C. D.; Morgan, C. L.; Coghill, D.; Currie, C. J.	2013	Moderate Risk of Bias
Holland, J.; Sayal, K.	2018	Moderate Risk of Bias
Hollingworth, S. A.; Nissen, L. M.; Stathis, S. S.; Siskind, D. J.; Varghese, J. M. N.; Scott, J. G.	2011	Low Risk of Bias
Holmskov, M.; Storebo, O. J.; Moreira-Maia, C. R.; Ramstad, E.; Magnusson, F. L.; Krogh, H. B.; Groth, C.; Gillies, D.; Zwi, M.; Skoog, M.; Glud, C.; Simonsen, E.	2017	Low Risk of Bias
Hong, S. B.; Dwyer, D.; Kim, J. W.; Park, E. J.; Shin, M. S.; Kim, B. N.; Yoo, H. J.; Cho, I. H.; Bhang, S. Y.; Hong, Y. C.; Pantelis, C.; Cho, S. C.	2014	High Risk of Bias
Huang, C. L.; Chu, C. C.; Cheng, T. J.; Weng, S. F.	2014	Low Risk of Bias
Huang, C.L.; J. J. Wang; C. H. Ho	2020	Low Risk of Bias
Hudziak, J. J.; Heath, A. C.; Madden, P. F.; Reich, W.; Bucholz, K. K.; Slutske, W.; Bierut, L. J.; Neuman, R. J.; Todd, R. D.	1998	High Risk of Bias
Hugtenburg, J.; E. Heerdink; A. Egberts	2004	Low Risk of Bias
Humphreys, K. L.; Eng, T.; Lee, S. S.	2013	Moderate Risk of Bias
Huss, M.; Holling, H.; Kurth, B. M.; Schlack, R.	2008	Low Risk of Bias

Huss, M.; Poustka, F.; Lehmkuhl, G.; Lehmkuhl, U.	2008	Moderate Risk of Bias
Jaber, L.; Rigler, S.; Shuper, A.; Diamond, G.	2017	Moderate Risk of Bias
Jangmo, A.; Stalhandske, A.; Chang, Z.; Chen, Q.; Almqvist, C.; Feldman, I.; Bulik, C. M.; Lichtenstein, P.; D'Onofrio, B.; Kuja-Halkola, R.; Larsson, H.	2019	Low Risk of Bias
Janols, L. O.; Liliemark, J.; Klintberg, K.; von Knorring, A. L.	2009	Moderate Risk of Bias
Jick, H.; Kaye, J. A.; Black, C.	2004	Moderate Risk of Bias
Johansen, M. E.; Matic, K.; McAlearney, A. S.	2015	Low Risk of Bias
Karanges, E. A.; Stephenson, C. P.; McGregor, I. S.	2014	Moderate Risk of Bias
Karlstad, O.; Furu, K.; Stoltenberg, C.; Haberg, S. E.; Bakken, I. J.	2017	Low Risk of Bias
Keen, D.; Hadijikoumi, I.	2011	Moderate Risk of Bias
Keilow, M.; Holm, A.; Fallesen, P.	2018	Moderate Risk of Bias
King, S.; Griffin, S.; Hodges, Z.; Weatherly, H.; Asseburg, C.; Richardson, G.; Golder, S.; Taylor, E.; Drummond, M.; Riemsma, R.	2006	Low Risk of Bias
Kirova, A. M.; Kelberman, C.; Storch, B.; DiSalvo, M.; Woodworth, K. Y.; Faraone, S. V.; Biederman, J.	2019	High Risk of Bias
Klasen, H.	2000	Low Risk of Bias
Klassen, A.; Miller, A.; Raina, P.; Lee, S. K.; Olsen, L.	1999	Moderate Risk of Bias
Knellwolf, A.-L.; J. Deligne; F. Chiarotti; G.-R. Auleley; S. Palmieri; C. Blum Boisgard; E. Autret-Leca	2008	Moderate Risk of Bias
Konrad-Bindl, D. S.; Gresser, U.; Richartz, B. M.	2016	High Risk of Bias
Koonce, Danel A.; Cruce, Michael K.; Aldridge, Jennifer O.; Langford, Courtney A.; Sporer, Amy K.; Stinnett, Terry A.	2004	High Risk of Bias
Kortekaas-Rijlaarsdam, A. F.; Luman, M.; Sonuga-Barke, E.; Oosterlaan, J.	2019	Low Risk of Bias
Lahey, B B; W. E. Pelham; A. Chronis; G. Massetti; H. Kipp; A. Ehrhardt; S. S. Lee	2006	Moderate Risk of Bias
Lahey, B. B.; Applegate, B.; McBurnett, K.; Biederman, J.; Greenhill, L.; Hynd, G. W.; Barkley, R. A.; Newcorn, J.; Jensen, P.; Richters, J.; et al.,	1994	High Risk of Bias
Lahey, B. B.; Loeber, R.; Stouthamer-Loeber, M.; Christ Green, M. A. G. S.; Russo, M. F.; Frick, P. J.; Dulcan, M.	1990	High Risk of Bias
Landgren, M.; Nasic, S.; Johnson, M.; Lovoll, T.; Holmgren, D.; Fernell, E.	2017	High Risk of Bias
Langberg, J. M.; Becker, S. P.	2012	High Risk of Bias
Langner, I.; Haug, U.; Scholle, O.; Lindemann, C.; Schroder, C.; Riedel, O.	2019	Low Risk of Bias
Larsson, H.; Anckarsater, H.; Rastam, M.; Chang, Z.; Lichtenstein, P.	2012	Low Risk of Bias
Law, G.; Sinclair, Scott; Fraser, Nicole	2007	High Risk of Bias
Layton, T. J.; Barnett, M. L.; Hicks, T. R.; Jena, A. B.	2018	Low Risk of Bias

Lecendreux, M.; Konofal, E.; Cortese, S.; Faraone, S. V.	2015	High Risk of Bias
Lecendreux, M.; Silverstein, M.; Konofal, E.; Cortese, S.; Faraone, S. V.	2019	High Risk of Bias
Lee, S. I.; Schachar, R. J.; Chen, S. X.; Ornstein, T. J.; Charach, A.; Barr, C.; Ickowicz, A.	2008	High Risk of Bias
Leibson, C. L.; Barbaresi, W. J.; Ransom, J.; Colligan, R. C.; Kemner, J.; Weaver, A. L.; Katusic, S. K.	2006	Low Risk of Bias
Leung, P. W.; S. L. Luk; T. P. Ho; E. Taylor; F. L. Mak; J. Bacon-Shone	1996	Low Risk of Bias
Levine, M.; Froberg, B.; Ruha, A. M.; Burns-Ewald, M.; Yen, M.; Claudius, I. A.; Arthur, A. O.; Tormoehlen, L.; Thomas, S. H.	2013	High Risk of Bias
Levy, F.; Hay, D. A.; McStephen, M.; Wood, C.; Waldman, I.	1997	High Risk of Bias
Liang, S. H.; Yang, Y. H.; Kuo, T. Y.; Liao, Y. T.; Lin, T. C.; Lee, Y.; McIntyre, R. S.; Kelsen, B. A.; Wang, T. N.; Chen, V. C.	2018	Moderate Risk of Bias
Lillemoen, P. K.; Kjosavik, S. R.; Hunskar, S.; Ruths, S.	2012	Low Risk of Bias
Lisska, M. C.; Rivkees, S. A.	2003	High Risk of Bias
Longridge, R.; Norman, S.; Henley, W.; Newlove Delgado, T.; Ford, T.	2019	High Risk of Bias
Lopez-Leon, S.; Lopez-Gomez, M. I.; Warner, B.; Ruiter-Lopez, L.	2018	Low Risk of Bias
Loughran, Sandra B.	2003	High Risk of Bias
Lubke, G. H.; Hudziak, J. J.; Derks, E. M.; van Bijsterveldt, T. C.; Boomsma, D. I.	2009	Moderate Risk of Bias
M. T. A. Cooperative Group	2004	Low Risk of Bias
Madsen, K. B.; Ravn, M. H.; Arnfred, J.; Olsen, J.; Rask, C. U.; Obel, C.	2018	Low Risk of Bias
Maia, C. R.; Cortese, S.; Caye, A.; Deakin, T. K.; Polanczyk, G. V.; Polanczyk, C. A.; Rohde, L. A.	2017	High Risk of Bias
Malacrida, C.	2004	High Risk of Bias
Man, K. K. C.; Coghill, D.; Chan, E. W.; Lau, W. C. Y.; Hollis, C.; Liddle, E.; Banaschewski, T.; McCarthy, S.; Neubert, A.; Sayal, K.; Ip, P.; Schuemie, M. J.; Sturkenboom, Mcjm; Sonuga-Barke, E.; Buitelaar, J.; Carucci, S.; Zuddas, A.; Kovshoff, H.; Garas, P.; Nagy, P.; Inglis, S. K.; Konrad, K.; Hage, A.; Rosenthal, E.; Wong, I. C. K.	2017	Low Risk of Bias
Man, Kenneth K.; Ip, Patrick; Hsia, Yingfen; Chan, Esther W.; Chui, Celine S.; Lam, May P.; Wong, Wilfred H.; Chow, C.; Yung, Ada; Wong, Ian C.	2017	Low Risk of Bias
Maneeton, B.; Maneeton, N.; Likhitsathian, S.; Suttajit, S.; Narkpongphun, A.; Srisurapanont, M.; Woottitluk, P.	2015	Moderate Risk of Bias
Mann, E. M. et al	1992	High Risk of Bias
Mannuzza, S.; Klein, R. G.; Truong, N. L.; Moulton, Iii J. L.; Roizen, E. R.; Howell, K. H.; Castellanos, F. X.	2008	High Risk of Bias
Marcus, D. K.; Barry, T. D.	2011	Low Risk of Bias
McCarthy, S.; Cranswick, N.; Potts, L.; Taylor, E.; Wong, I. C.	2009	Moderate Risk of Bias
McCarthy, S.; Wilton, L.; Murray, M. L.; Hodgkins, P.; Asherson, P.; Wong, I. C.	2012	Low Risk of Bias

McKeown, R. E.; Holbrook, J. R.; Danielson, M. L.; Cuffe, S. P.; Wolraich, M. L.; Visser, S. N.	2015	Moderate Risk of Bias
McLennan, J. D.	2016	High Risk of Bias
Merrell, Christine; Sayal, Kapil; Tymms, Peter; Kasim, Adetayo	2017	Low Risk of Bias
Metzger, A.N.; L. T. Hamilton	2020	Low Risk of Bias
Meza, J. I.; Monroy, M.; Ma, R.; Mendoza-Denton, R.	2019	High Risk of Bias
Mikolajczyk, R.; Horn, J.; Schmedt, N.; Langner, I.; Lindemann, C.; Garbe, E.	2015	Low Risk of Bias
Moen, M. D.; Keam, S. J.	2009	High Risk of Bias
Mohr Jensen, C.; Steinhausen, H. C.	2015	Low Risk of Bias
Mohr-Jensen, Christina; Bisgaard, Charlotte Muller; Boldsen, Soren Kjaersgaard; Steinhausen, Hans-Christoph	2019	Low Risk of Bias
Molina, B. S.; Hinshaw, S. P.; Swanson, J. M.; Arnold, L. E.; Vitiello, B.; Jensen, P. S.; Epstein, J. N.; Hoza, B.; Hechtman, L.; Abikoff, H. B.; Elliott, G. R.; Greenhill, L. L.; Newcorn, J. H.; Wells, K. C.; Wigal, T.; Gibbons, R. D.; Hur, K.; Houck, P. R.; M. T. A. Cooperative Group	2009	Low Risk of Bias
Moore, D.; Russell, A.; Arnell, S.; Ford, T.	2017	Low Risk of Bias
Moran, L. V., Ongur, D., Hsu, J., Castro, V. M., Perlis, R. H., Schneeweiss, S.	2019	Low Risk of Bias
Morgan, P. L.; J. Staff; M. M. Hillemeier; G. Farkas; S. Maczuga	2013	Moderate Risk of Bias
Morkem, R.; Patten, S.; Queenan, J.; Barber, D.	2017	High Risk of Bias
Morley, C. P.	2010	Moderate Risk of Bias
Morrow, Richard L.; Garland, E.; Wright, James M.; Maclure, Malcolm; Taylor, Suzanne; Dormuth, Colin R.	2012	Low Risk of Bias
Newcorn, J. H.; Halperin, J. M.; Schwartz, S.; Pascualvaca, D.; Wolf, L.; Schmeidler, J.; Sharma, V.	1994	High Risk of Bias
Newcorn, J.; Halperin, Jeffrey M.; Healey, Jane M.; O'Brien, John D.; Pascualvaca, Daisy M.; Wolf, Lorraine E.; Morganstein, Allen; Sharma, Vanshdeep; Young, J.	1989	High Risk of Bias
Noren Selinus, E.; Molero, Y.; Lichtenstein, P.; Anckarsater, H.; Lundstrom, S.; Bottai, M.; Hellner Gumpert, C.	2016	Low Risk of Bias
Nyarko, K. A.; Grosse, S. D.; Danielson, M. L.; Holbrook, J. R.; Visser, S. N.; Shapira, S. K.	2017	Low Risk of Bias
O'Connor, Briannon; Garner, Annie A.; Peugh, James L.; Simon, John; Epstein, Jeffrey N.	2015	Moderate Risk of Bias
O'Connor, C.; F. McNicholas	2020	Low Risk of Bias
Ohan, J. L.; Visser, T. A.; Moss, R. G.; Allen, N. B.	2013	High Risk of Bias
Ohan, J. L.; Visser, T. A.; Strain, M. C.; Allen, L.	2011	High Risk of Bias
Okumura, Y.; Yamasaki, S.; Ando, S.; Usami, M.; Endo, K.; Hiraiwa-Hasegawa, M.; Kasai, K.; Nishida, A.	2019	Moderate Risk of Bias
Olfson, M.; Gameroff, M. J.	2003	Moderate Risk of Bias
Oner, O.; Yilmaz, E. S.; Karadag, H.; Vural, M.; Vural, E. H.; Akbulut, A.; Gursoz, H.; Turkcapar, H.; Kerman, S.	2017	Low Risk of Bias

Otasowie, J.; Castells, X.; Ehimare, U. P.; Smith, C. H.	2014	Low Risk of Bias
Owens, J.	2020	Low Risk of Bias
Owens, J.; Jackson, H.	2017	Low Risk of Bias
Parker, J.; Wales, G.; Chalhoub, N.; Harpin, V.	2013	Low Risk of Bias
Perez-Crespo, L.; J. Canals-Sans; E. Suades-Gonzalez; M. Guxens	2020	Low Risk of Bias
Perry, B. A.; Archer, K. R.; Song, Y.; Ma, Y.; Green, J. K.; Elefteriou, F.; Dahir, K. M.	2016	High Risk of Bias
Peyre, H.; Hoertel, N.; Cortese, S.; Acquaviva, E.; De Maricourt, P.; Limosin, F.; Delorme, R.	2014	Moderate Risk of Bias
Polanczyk, G. V.; Willcutt, E. G.; Salum, G. A.; Kieling, C.; Rohde, L. A.	2014	Moderate Risk of Bias
Polanczyk, G.; Caspi, A.; Houts, R.; Kollins, S. H.; Rohde, L. A.; Moffitt, T. E.	2010	Moderate Risk of Bias
Ponizovsky, A. M.; Marom, E.; Fitoussi, I.	2014	Low Risk of Bias
Pottegard, A.; Bjerregaard, B. K.; Glintborg, D.; Hallas, J.; Moreno, S. I.	2012	Low Risk of Bias
Poulton, A.	2005	High Risk of Bias
Poulton, A. S.; Bui, Q.; Melzer, E.; Evans, R.	2016	High Risk of Bias
Powell, S. G.; Frydenberg, M.; Thomsen, P. H.	2015	Moderate Risk of Bias
Pozzi, M.; Carnovale, C.; Peeters, Ggam; Gentili, M.; Antoniazzi, S.; Radice, S.; Clementi, E.; Nobile, M.	2018	Moderate Risk of Bias
Prasad, V.; Brogan, E.; Mulvaney, C.; Grainge, M.; Stanton, W.; Sayal, K.	2013	Moderate Risk of Bias
Prasad, V.; West, J.; Kendrick, D.; Sayal, K.	2018	Low Risk of Bias
Prosser, B.; Lambert, M. C.; Reid, R.	2015	Moderate Risk of Bias
Prosser, B.; Reid, R.	2009	Moderate Risk of Bias
Punja, S.; Shamseer, L.; Hartling, L.; Urichuk, L.; Vandermeer, B.; Nikles, J.; Vohra, S.	2016	Low Risk of Bias
Raman, S. R.; Marshall, S. W.; Haynes, K.; Gaynes, B. N.; Naftel, A. J.; Sturmer, T.	2013	Moderate Risk of Bias
Raman, Sudha R.; Man, Kenneth K.; Bahmanyar, Shahram; Berard, Anick; Bilder, Scott; Boukhris, Takoua; Bushnell, Greta; Crystal, Stephen; Furu, Kari; KaoYang, Yea-Huei; Karlstad, Oystein; Kieler, Helle; Kubota, Kiyoshi; Lai, Edward Chia-Cheng; Martikainen, Jaana E.; Maura, Geric; Moore, Nicholas; Montero, Dolores; Nakamura, Hidefumi; Neumann, Anke; Pate, Virginia; Pottegard, Anton; Pratt, Nicole L.; Roughead, Elizabeth E.; Macias Saint-Gerons, Diego; Sturmer, Til; Su, Chien-Chou; Zoega, Helga; Sturkenbroom, Miriam C.; Chan, Esther W.; Coghill, David; Ip, Patrick; Wong, Ian C.	2018	Low Risk of Bias
Renoux, C.; Shin, J. Y.; Dell'Aniello, S.; Fergusson, E.; Suissa, S.	2016	Moderate Risk of Bias
Reyes, N.; Baumgardner, D. J.; Simmons, D. H.; Buckingham, W.	2013	High Risk of Bias
Riera, M.; Castells, X.; Tobias, A.; Cunill, R.; Blanco, L.; Capella, D.	2017	Low Risk of Bias



Robison, L. M.; Sclar, D. A.; Skaer, T. L.; Galin, R. S.	1999	Moderate Risk of Bias
Robison, L. M.; Skaer, T. L.; Sclar, D. A.; Galin, R. S.	2002	Moderate Risk of Bias
Rogalin, Mathilda Tassinari; Nencini, Alessio	2015	High Risk of Bias
Romano, E.; Baillargeon, R. H.; Wu, H. X.; Robaey, P.; Tremblay, R. E.	2002	High Risk of Bias
Rowland, A. S.; Umbach, D. M.; Catoe, K. E.; Stallone, L.; Long, S.; Rabiner, D.; Naftel, A. J.; Panke, D.; Faulk, R.; Sandler, D. P.	2001	Moderate Risk of Bias
Rowland, Andrew S.; Umbach, David M.; Stallone, Lil; Naftel, A.; Bohlig, E.; Sandler, Dale P.	2002	Moderate Risk of Bias
Ruiz-Goikoetxea, M.; Cortese, S.; Aznarez-Sanado, M.; Magallon, S.; Alvarez Zallo, N.; Luis, E. O.; de Castro-Manglano, P.; Soutullo, C.; Arrondo, G.	2018	Low Risk of Bias
Rydell, M.; Lundstrom, S.; Gillberg, C.; Lichtenstein, P.; Larsson, H.	2018	Low Risk of Bias
Safer, D. J.	2018	High Risk of Bias
Safer, D. J.	2011	High Risk of Bias
Safer, D. J.; Krager, J. M.	1994	High Risk of Bias
Safer, D. J.; Krager, J. M.	1983	High Risk of Bias
Safer, Daniel J.; Krager, John M.	1984	High Risk of Bias
Salmelainen, P.	2002	Low Risk of Bias
Santosh, P. J.; E. Taylor; J. Swanson; T. Wigal; S. Chuang; M. Davies; L. Greenhill; J. Newcorn; L. E. Arnold; P. Jensen; B. Vitiello; G. Elliott; S. Hinshaw; L. Hechtman; H. Abikoff; W. Pelham; B. Hoza; B. Molina; K. Wells; J. Epstein; M. Posner	2005	Moderate Risk of Bias
Sawyer, Michael G.; Reece, Christy E.; Sawyer, Alyssa C.; Johnson, Sarah E.; Lawrence, David	2018	Low Risk of Bias
Sayal, K.; Chudal, R.; Hinkka-Yli-Salomaki, S.; Joelsson, P.; Sourander, A.	2017	Low Risk of Bias
Sayal, K.; Owen, V.; White, K.; Merrell, C.; Tymms, P.; Taylor, E.	2010	Moderate Risk of Bias
Sayal, K.; Washbrook, E.; Propper, C.	2015	Moderate Risk of Bias
Schachar, R et al	2002	Low Risk of Bias
Schachter, H. M.; Pham, B.; King, J.; Langford, S.; Moher, D.	2001	Low Risk of Bias
Scheffler, R. M.; S. P. Hinshaw; S. Modrek; P. Levine	2007	High Risk of Bias
Scheffler, R. M.; T. T. Brown; B. D. Fulton; S. Hinshaw; P. Levine; S. Stone	2009	Moderate Risk of Bias
Schelleman, H.; Bilker, W. B.; Strom, B. L.; Kimmel, S. E.; Newcomb, C.; Guevara, J. P.; Daniel, G. W.; Cziraky, M. J.; Hennessy, S.	2011	High Risk of Bias
Schmiedeler, S.; Schneider, W.	2014	Moderate Risk of Bias
Schneider, H.; Eisenberg, D.	2006	Low Risk of Bias
Schubert, I.; Koster, I.; Lehmkuhl, G.	2010	Low Risk of Bias
Schwandt, H.; A. Wuppermann	2016	Low Risk of Bias
Schwartz, S.; Correll, C. U.	2014	Moderate Risk of Bias

Schweren, L.; Hoekstra, P.; van Lieshout, M.; Oosterlaan, J.; Lambregts-Rommelse, N.; Buitelaar, J.; Franke, B.; Hartman, C.	2019	Low Risk of Bias
Sclar, D. A.; Robison, L. M.; Bowen, K. A.; Schmidt, J. M.; Castillo, L. V.; Oganov, A. M.	2012	Moderate Risk of Bias
Sellers, R.; Maughan, B.; Pickles, A.; Thapar, A.; Collishaw, S.	2015	Moderate Risk of Bias
Setlik, Jennifer; Bond, G.; Ho, Mona	2009	Moderate Risk of Bias
Shem-Tov, S.; G. Chodick; D. Weitzman; G. Koren	2019	Low Risk of Bias
Shin, J. Y.; Roughead, E. E.; Park, B. J.; Pratt, N. L.	2016	Low Risk of Bias
Sibley, M. H.; Kuriyan, A. B.; Evans, S. W.; Waxmonsky, J. G.; Smith, B. H.	2014	High Risk of Bias
Sibley, Margaret H.; Rohde, Luis A.; Swanson, James M.; Hechtman, Lily T.; Molina, Brooke S.; Mitchell, John T.; Arnold, L.; Caye, Arthur; Kennedy, Traci M.; Roy, Arunima; Stehli, Annamarie	2018	Low Risk of Bias
Siegel, C. E.; Laska, E. M.; Wanderling, J. A.; Hernandez, J. C.; Levenson, R. B.	2016	Low Risk of Bias
Singh, I.	2011	High Risk of Bias
Skounti, M.; Philalithis, A.; Galanakis, E.	2007	High Risk of Bias
Smith, G.; B. Jongeling; P. Hartmann; C. Russell; L. Landau	2010	Moderate Risk of Bias
Song, I.; Lee, M. S.; Lee, E. K.; Shin, J. Y.	2018	Low Risk of Bias
Song, I.; Shin, J. Y.	2016	Low Risk of Bias
Song, M.; Dieckmann, N. F.; Nigg, J. T.	2018	Moderate Risk of Bias
Stinnett, Terry A.; Crawford, Stephanie A.; Gillespie, Marci D.; Cruce, Michael K.; Langford, Courtney A.	2001	High Risk of Bias
Storebo, O. J.; Pedersen, N.; Ramstad, E.; Kielsholm, M. L.; Nielsen, S. S.; Krogh, H. B.; Moreira-Maia, C. R.; Magnusson, F. L.; Holmskov, M.; Gerner, T.; Skoog, M.; Rosendal, S.; Groth, C.; Gillies, D.; Buch Rasmussen, K.; Gauci, D.; Zwi, M.; Kirubakaran, R.; Hakonsen, S. J.; Aagaard, L.; Simonsen, E.; Gluud, C.	2018	Low Risk of Bias
Storebo, O. J.; Ramstad, E.; Krogh, H. B.; Nilausen, T. D.; Skoog, M.; Holmskov, M.; Rosendal, S.; Groth, C.; Magnusson, F. L.; Moreira-Maia, C. R.; Gillies, D.; Buch Rasmussen, K.; Gauci, D.; Zwi, M.; Kirubakaran, R.; Forsbol, B.; Simonsen, E.; Gluud, C.	2015	Low Risk of Bias
Stuckelman, Z. D.; Mulqueen, J. M.; Ferracioli-Oda, E.; Cohen, S. C.; Coughlin, C. G.; Leckman, J. F.; Bloch, M. H.	2017	Moderate Risk of Bias
Stuhec, M.; Locatelli, I.; Svab, V.	2015	Moderate Risk of Bias
Stuhec, M.; Svab, V.; Locatelli, I.	2015	Moderate Risk of Bias

Swanson, James M.; Arnold, L.; Molina, Brooke S.; Sibley, Margaret H.; Hechtman, Lily T.; Hinshaw, Stephen P.; Abikoff, Howard B.; Stehli, Annamarie; Owens, Elizabeth B.; Mitchell, John T.; Nichols, Quyen; Howard, Andrea; Greenhill, Laurence L.; Hoza, Betsy; Newcorn, Jeffrey H.; Jensen, Peter S.; Vitiello, Benedetto; Wigal, Timothy; Epstein, Jeffery N.; Tamm, Leanne; Lakes, Kimberly D.; Waxmonsky, James; Lerner, Marc; Etcovitch, Joy; Murray, Desiree W.; Muenke, Maximilian; Acosta, Maria T.; Arcos-Burgos, Mauricio; Pelham, William E.; Kraemer, Helena C.	2017	Low Risk of Bias
Thomas, C. P.; Conrad, P.; Casler, R.; Goodman, E.	2006	Moderate Risk of Bias
Thomas, R.; Sanders, S.; Doust, J.; Beller, E.; Glasziou, P.	2015	Low Risk of Bias
Toh, S.	2006	Moderate Risk of Bias
Treceno, C.; Martin Arias, L. H.; Sainz, M.; Salado, I.; Garcia Ortega, P.; Velasco, V.; Jimeno, N.; Escudero, A.; Velasco, A.; Carvajal, A.	2012	Moderate Risk of Bias
Trip, A. M.; Visser, S. T.; Kalverdiijk, L. J.; De Jong-Van Den Berg, L. T. W.	2009	Low Risk of Bias
Valdizan-Uson, J.; Canovas-Martinez, A.; De Lucas-Taracena, M.; Diaz-Atienza, F.; Eddy-Ives, L.; Fernandez-Jaen, A.; Fernandez-Perez, M.; Garcia-Giral, M.; Garcia-Magan, P.; Garraus-Oneca, M.; Idiazabal-Alecha, M.; Lopez-Benito, M.; Lorenzo-Sanz, G.; Martinez-Anton, J.; Martinez-Granero, M.; Montanes-Rada, F.; Mulas-Delgado, F.; Ochando-Perales, G.; Ortega-Garcia, E.; Pelaz-Antolin, A.; Ramos-Quiroga, J.; Ruiz-Sanz, F.; Vaquerizo-Madrid, J.; Yusta-Izquierdo, A.	2013	High Risk of Bias
Valentine, J.; Zubrick, S.; Sly, P.	1996	High Risk of Bias
Van Den Ban, E.; Souverein, P.; Meijer, W.; Van Engeland, H.; Swaab, H.; Egberts, T.; Heerdink, E.	2014	Low Risk of Bias
Van Den Ban, E.; Souverein, P.; Swaab, H.; Van Engeland, H.; Heerdink, R.; Egberts, T.	2010	Low Risk of Bias
Van der Oord, S.; Prins, P. J.; Oosterlaan, J.; Emmelkamp, P. M.	2008	High Risk of Bias
van Lieshout, M.; Luman, M.; Twisk, J. W.; van Ewijk, H.; Groenman, A. P.; Thissen, A. J.; Faraone, S. V.; Heslenfeld, D. J.; Hartman, C. A.; Hoekstra, P. J.; Franke, B.; Buitelaar, J. K.; Rommelse, N. N.; Oosterlaan, J.	2016	Moderate Risk of Bias
Vande Voort, J. L.; He, J. P.; Jameson, N. D.; Merikangas, K. R.	2014	Moderate Risk of Bias
Vasiliadis, H. M.; Diallo, F. B.; Rochette, L.; Smith, M.; Langille, D.; Lin, E.; Kisely, S.; Fombonne, E.; Thompson, A. H.; Renaud, J.; Lesage, A.	2017	Low Risk of Bias
Vinker, S.; Vinker, R.; Elhayany, A.	2006	Low Risk of Bias
Visser, Susanna N.; Danielson, Melissa L.; Bitsko, Rebecca H.; Holbrook, Joseph R.; Kogan, Michael D.; Ghandour, Reem M.; Perou, Ruth; Blumberg, Stephen J.	2014	Moderate Risk of Bias

Vitiello, Benedetto; Elliott, Glen R.; Swanson, James M.; Arnold, L.; Hechtman, Lily; Abikoff, Howard; Molina, Brooke S.; Wells, Karen; Wigal, Timothy; Jensen, Peter S.; Greenhill, Laurence L.; Kaltman, Jonathan R.; Severe, Joanne B.; Odbert, Carol; Hur, Kwan; Gibbons, Robert	2012	Low Risk of Bias
Vuori, M.; Kski-Pirila, A.; Martikainen, J. E.; Saastamoinen, L.	2020	Moderate Risk of Bias
Wang, L. J.; Chen, C. K.; Huang, Y. S.	2015	High Risk of Bias
Wang, L. J.; Lee, S. Y.; Yuan, S. S.; Yang, C. J.; Yang, K. C.; Lee, T. L.; Shyu, Y. C.	2016	Low Risk of Bias
Wang, L.; Lee, S.; Yuan, S.; Yang, C.; Yang, K.; Huang, T.; Chou, W.; Chou, M.; Lee, M.; Lee, T.; Shyu, Y.	2017	Low Risk of Bias
Westover, A. N.; Halm, E. A.	2012	High Risk of Bias
Whalen, C. K.; Jamner, L. D.; Henker, B.; Delfino, R. J.; Lozano, J. M.	2002	High Risk of Bias
Whitely, M.; Raven, M.; Timimi, S.; Jureidini, J.; Phillimore, J.; Leo, J.; Moncrieff, J.; Landman, P.	2019	Moderate Risk of Bias
Wienen, A. W.; Sluiter, M. N.; Thoutenhoofd, E.; de Jonge, P.; Batstra, L.	2019	High Risk of Bias
Wilens, T. E.; Adamson, J.; Monuteaux, M. C.; Faraone, S. V.; Schillinger, M.; Westerberg, D.; Biederman, J.	2008	High Risk of Bias
Wilens, T. E.; Faraone, S. V.; Biederman, J.; Gunawardene, S.	2003	High Risk of Bias
Wilens, T. E.; L. A. Adler; J. Adams; S. Sgambati; J. Rotrosen; R. Sawtelle; L. Utzinger; S. Fusillo	2008	High Risk of Bias
Winterstein, A. G.; Gerhard, T.; Kubilis, P.; Saidi, A.; Linden, S.; Crystal, S.; Zito, J.; Shuster, J. J.; Olfson, M.	2012	Low Risk of Bias
Winterstein, A. G.; Gerhard, T.; Shuster, J.; Zito, J.; Johnson, M.; Liu, H.; Saidi, A.	2008	Low Risk of Bias
Winterstein, A. G.; Y. Li; T. Gerhard; S. Linden; J. J. Shuster	2020	Low Risk of Bias
Wolraich, M. L.; Hannah, J. N.; Baumgaertel, A.; Feurer, I. D.	1998	Moderate Risk of Bias
Wolraich, M. L.; Hannah, J. N.; Pinnock, T. Y.; Baumgaertel, A.; Brown, J.	1996	High Risk of Bias
Xu, G.; Strathearn, L.; Liu, B.; Yang, B.; Bao, W.	2018	Moderate Risk of Bias
Yoon, E. Y.; Cohn, L.; Rocchini, A.; Kershaw, D.; Clark, S. J.	2012	Moderate Risk of Bias
Yoshida, M.; Obara, T.; Kikuchi, S.; Satoh, M.; Morikawa, Y.; Ooba, N.; Yamaguchi, H.; Mano, N.	2019	Low Risk of Bias
Zablotsky, B.; L. I. Black; M. J. Maenner; L. A. Schieve; M. L. Danielson; R. H. Bitsko; S. J. Blumberg; M. D. Kogan; C. A. Boyle	2019	Moderate Risk of Bias
Zachor, D. A.; Roberts, A. W.; Bart Hodgins, J.; Isaacs, J. S.; Merrick, J.	2006	High Risk of Bias
Zetterqvist, J.; Asherson, P.; Halldner, L.; Langstrom, N.; Larsson, H.	2013	Low Risk of Bias
Zhang, H et al	2010	High Risk of Bias
Zito, J. M.; Safer, D. J.; dosReis, S.; Gardner, J. F.; Boles, M.; Lynch, F.	2000	Low Risk of Bias

Zito, J. M.; Safer, D. J.; DosReis, S.; Magder, L. S.; Gardner, J. F.; Zarin, D. A.	1999	Moderate Risk of Bias
Zoega, H.; Rothman, K. J.; Huybrechts, K. F.; Olafsson, O.; Baldursson, G.; Almarsdottir, A. B.; Jonsdottir, S.; Halldorsson, M.; Hernandez-Diaz, S.; Valdimarsdottir, U. A.	2012	Low Risk of Bias
Zuvekas, S. H.; Vitiello, B.	2012	Moderate Risk of Bias
Zuvekas, S. H.; Vitiello, B.; Norquist, G. S.	2006	Moderate Risk of Bias

All details for each critical appraisal can be found [here](#).

## eAppendix 6. Results Table

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
<b>Q1 Is there potential for increased diagnosis (n=104)</b>			
Prevalence Variations (68)	in Subpopulations (48) by	Gender (25)	<ul style="list-style-type: none"> <li>• Lower diagnosis in girls than boys (12)<sup>2-13</sup> <ul style="list-style-type: none"> <li>• with no change in ratios over time (1)<sup>14</sup></li> <li>• with decreasing ratios over time (8)<sup>15-22</sup></li> <li>• and lower symptomatic prevalence in girls (2)<sup>23,24</sup></li> </ul> </li> <li>• Symptomatic girls less likely to be diagnosed (2)<sup>25,26</sup></li> </ul>
		SES/ Insurance status (21)	<ul style="list-style-type: none"> <li>• Higher diagnosis in lower SES (12)<sup>3-5,7,8,10,13,21,22,27-29</sup> <ul style="list-style-type: none"> <li>• and higher symptomatic prevalence (1)<sup>24</sup></li> </ul> </li> <li>• Higher diagnosis in higher SES (1)<sup>30</sup></li> <li>• Higher diagnosis in public vs private health insurance (2)<sup>13,29</sup> <ul style="list-style-type: none"> <li>• but ratios decreasing over time (3)<sup>18,21,31</sup></li> </ul> </li> <li>• Lower diagnosis in no vs any health insurance (7)<sup>13,21,25,29,32-34</sup></li> <li>• Lower diagnosis in lower SES in rural areas but not in urban areas (1)<sup>35</sup></li> <li>• No effect of insurance status on diagnosis in hypothetical scenario (1)<sup>26</sup></li> </ul>
		Race/ Ethnicity/ Indigenous status (21)	<ul style="list-style-type: none"> <li>• Lower diagnosis in black/ Hispanic vs white youths (7)<sup>3,4,6,9,10,13,33</sup> <ul style="list-style-type: none"> <li>• but decreasing ratios over time (sometimes black rates overtaking white ones) (5)<sup>16,18,22,27,36</sup></li> <li>• but not lower symptomatic prevalence (2)<sup>32,37</sup></li> </ul> </li> <li>• Lower diagnosis in whites than in black youths (4)<sup>5,11,12,38</sup></li> <li>• Lower diagnosis in youths from non-English speaking background (2)<sup>3,4</sup></li> <li>• No effect of race on diagnosis in hypothetical scenario (1)<sup>26</sup></li> <li>• Youths with migrant background less likely to be diagnosed (1)<sup>24</sup></li> </ul>
		Relative age (12)	<ul style="list-style-type: none"> <li>• Youngest children in class much more likely to be diagnosed than oldest (11)<sup>39-49</sup></li> <li>• In a setting with low diagnosis where only specialists can diagnose, there is no difference in diagnosis probability between youngest and oldest in class (1)<sup>50</sup></li> </ul>

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
		Location/ Region (8)	<ul style="list-style-type: none"> <li>• Large variations in diagnosis by region (8)<sup>2-5,8,22,27,35</sup></li> </ul>
		Other (1)	<ul style="list-style-type: none"> <li>• Higher diagnosis and higher teacher perceived symptomatic prevalence in larger classrooms (1)<sup>6</sup></li> </ul>
	by Diagnosis (20)	Diagnostic criteria (20)	<ul style="list-style-type: none"> <li>• Broadening of criteria leads to increases in potential cases (18) for comparisons between: <ul style="list-style-type: none"> <li>• DSMIII and DSMIIIR (3)<sup>51-53</sup></li> <li>• DSMIIIR and DSMIV (2)<sup>12,54</sup></li> <li>• DSMIV to DSM5 (2)<sup>55,56</sup></li> <li>• DSMIII, DSMIIIR and DSMIV (4)<sup>57-60</sup></li> <li>• DSMIII, DSMIIIR, DSMIV and DSM5 (1)<sup>61</sup></li> <li>• DSMIII, DSMIIIR and ICD10 (1)<sup>62</sup></li> <li>• DSMIV and ICD10 (3)<sup>63-65</sup></li> <li>• DSMIV with early onset or late onset (2)<sup>66,67</sup></li> </ul> </li> <li>• Broadening of criteria leads to small/ minimal increases in potential cases (2) for comparisons between: <ul style="list-style-type: none"> <li>• DSMIV with early onset or late onset (1)<sup>68</sup></li> <li>• DSM5 with early onset or late onset (1)<sup>69</sup></li> </ul> </li> </ul>
Reservoir (44) due to	Medicalisation (3) of	Behavioural problems (3)	<ul style="list-style-type: none"> <li>• Society's decreasing tolerance towards different behaviour leads to increased range of behaviour identified and diagnosed as abnormal (2)<sup>28,70</sup></li> <li>• Mental health professionals from China/ Indonesia rating same attention difficulties higher than those from USA/ Japan (1)<sup>71</sup></li> </ul>
	Phenotype changes (5)	Trends over time (5)	<ul style="list-style-type: none"> <li>• Percentage of youths with clinically significant symptoms declined/stable over time (3)<sup>72-74</sup></li> <li>• Percentage of youths with clinically significant symptoms increased within one year (1)<sup>75</sup></li> <li>• Mean hyperactivity scores are stable over time (1)<sup>76</sup></li> <li>• Percentage of youths with subthreshold symptoms increased over time (1)<sup>72</sup></li> </ul>
	Diagnostic inaccuracy (16) leading to	Over-/Underdiagnosis (16)	<ul style="list-style-type: none"> <li>• Potential over- and underdiagnosis occurring due to false-negatives and -positives (6)<sup>34,37,77-80</sup></li> </ul>

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
			<ul style="list-style-type: none"><li>• Potential underdiagnosis due to false-negatives (5)<sup>23,72,73,81,82</sup></li><li>• Potential overdiagnosis due to false-positives (5)<sup>25,54,75,83,84</sup></li></ul>
	Spectrum of disorder (22) indicated by	Impact of extend of symptoms over time (13)	<ul style="list-style-type: none"><li>• Continuous dose-response relationships between increasing symptoms and increased risk of various later adverse outcomes (educational, employment, substance use, social and emotional difficulties), even at subthreshold level (13)<sup>85-97</sup></li></ul>
		Subthreshold prevalence (8)	<ul style="list-style-type: none"><li>• Large reservoirs (very varied estimated depending on criteria used) of youths displaying subthreshold symptoms (6)<sup>85-87,91,92,98</sup></li><li>• Percentage of youths displaying full- or subthreshold symptoms declines significantly with age until early adulthood (2)<sup>99,100</sup></li></ul>
		Verification of dimensional structure (7)	<ul style="list-style-type: none"><li>• Inattention, hyperactivity and impulsivity problems are best viewed on a continuum with ADHD as the extreme end of a spectrum (7)<sup>96,101-106</sup></li></ul>
Q2 Is diagnosis actually increased? (n=45)			
Diagnosis (45)	Trend over time (45) indicated by	Change in prevalence (30)	<ul style="list-style-type: none"><li>• Increasing trend (27)<sup>5,14,15,18-21,31,36,46,73,107-122</sup></li><li>• Increasing trend until early 2000s (3)<sup>2,30,123</sup> (data from 1989-2016)</li></ul>
		Change in incidence (12)	<ul style="list-style-type: none"><li>• Increasing trend (11)<sup>7,17,19,110,118,120,124-128</sup></li><li>• Increasing trend until 2007 (1)<sup>30</sup> (data from 1995-2017)</li></ul>
		Change in lifetime prevalence (12)	<ul style="list-style-type: none"><li>• Increasing trend (11)<sup>4,13,16,17,21,22,27,72,73,128,129</sup></li><li>• Stagnant in adolescent, increasing in children (1)<sup>29</sup> (data from 1996-2015)</li></ul>
Q3 Are additional cases milder? (n=25)			
	Impairment levels (11) indicated by	Change in adverse outcomes over time (2)	<ul style="list-style-type: none"><li>• Behaviour and academic problems decrease with increasing group of youths with ADHD (1)<sup>75</sup></li></ul>



Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
Severity of disorder (17) indicated by			<ul style="list-style-type: none"><li>Reduction in hospital visits in medicated children is decreased with increasing group of youths with ADHD (1)*<sup>129</sup></li></ul>
		Difference in adverse outcomes by diagnostic criteria (9)	<ul style="list-style-type: none"><li>Youths fulfilling ADHD criteria are less likely to be impaired in various domains with broadening of diagnostic criteria and increasing of group (5)<sup>53,54,57,62,65</sup>, only marginal effect in this direction (1)<sup>64</sup></li><li>Reduction in ADHD symptoms and social impairments in medicated children is decreased with broadening of ADHD criteria (1)*<sup>130</sup></li><li>Sample size too small to detect differences (2)<sup>52,68</sup></li></ul>
	Symptom severity (6) indicated by	Trend over time (3)	<ul style="list-style-type: none"><li>Severity proportions stable (1)<sup>109</sup></li><li>Larger increase in moderate/ severe cases (2)<sup>21,116</sup></li></ul>
		Proportions of mild, moderate, severe cases (2)	<ul style="list-style-type: none"><li>Proportion of youths with severe ADHD is (very) low (2)<sup>4,131</sup></li></ul>
		Change by diagnostic criteria (1)	<ul style="list-style-type: none"><li>Additional late onset cases do not differ from early onset ones in symptom severity (1)<sup>67</sup></li></ul>
Level of symptoms (8)	Clinically significant symptom prevalence (8) by	Change over time (compared to change in official diagnoses) (6)	<ul style="list-style-type: none"><li>Prevalence estimates of symptomatic ADHD have remained steady or slightly declined (4)<sup>59,60,74,76</sup><ul style="list-style-type: none"><li>while diagnostic prevalence has increased (2)<sup>72,73</sup></li></ul></li></ul>
		Change in relative age effect over time (2)	<ul style="list-style-type: none"><li>The relative age effect (younger children are more likely to be diagnosed than older children in the same year of school) has increased in later birth cohorts (2)<sup>41,47</sup></li></ul>
Q4 Are additional cases treated? (n=83)			
Medication (83)	Trend over time (83) indicated by	Change in prevalent treatment rate (58) (in youths)	<ul style="list-style-type: none"><li>Increasing trend (55)<sup>5,14,15,17,21,29,46,111,114,119-121,128,129,132-172</sup></li><li>Decreases in &lt;6-year-olds, increases in &gt;6-year-olds (2)<sup>173,174</sup></li><li>Mostly decreasing trend (2)<sup>112,142</sup></li></ul> (data from 1971-2018)

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
		Change in incident treatment rate (9) (in youths)	<ul style="list-style-type: none"><li>Increasing trend (5)<sup>120,145,154,175,176</sup></li><li>Stable/ variable rate (4)<sup>151,177-179</sup></li></ul> (data from 1977-2008)
		Change in medication usage (11) (in scripts/doses/sales)	<ul style="list-style-type: none"><li>Increasing trend (10)<sup>14,180-188</sup></li><li>Increasing trend until 2010 (1)<sup>189</sup></li></ul> (data from 1992-2012)
		Change in consultations in which ADHD medication is prescribed (10)	<ul style="list-style-type: none"><li>Increasing trend (9)<sup>18,20,109,113,117,122,123,190,191</sup></li><li>Increasing trend until 2004 in &lt;6-year-olds (1)<sup>192</sup></li></ul> (data from 1989-2015)
Q5a Might harms outweigh benefits of diagnosis? (n=31)			
Potential benefits of the diagnosis (15)	Empowerment (14) through	Explanation for problems (11)	<ul style="list-style-type: none"><li>Increased legitimacy and validation (5)<sup>28,193-196</sup></li><li>Increased understanding, sympathy and reassurance (8)<sup>194-201</sup></li><li>Reduced feelings of guilt, blame, fault, failure and anger (6)<sup>28,193,194,198,200,202</sup></li></ul>
		Increased control (6)	<ul style="list-style-type: none"><li>Reduced uncertainty leads to reclaiming of identity/ feeling of belonging (3)<sup>194,197,202</sup></li><li>Increased self-esteem and confidence (3)<sup>194,197,199</sup></li><li>Expectation of solution (4)<sup>193,194,197,200</sup></li></ul>
	Enablement (10) to	Support (10)	<ul style="list-style-type: none"><li>Increased ability to seek, receive and accept support (4)<sup>194,195,200,202</sup>:<ul style="list-style-type: none"><li>educational (3)<sup>193,196,200</sup></li><li>financial (1)<sup>28</sup></li><li>medical/psychological (4)<sup>70,193,198,199</sup></li></ul></li></ul>
Potential harms of the diagnosis (29)	Disempowerment (22) through	Excuse for problems (15)	<ul style="list-style-type: none"><li>Decreased responsibility for behaviour, parenting and teaching problems (6)<sup>70,193,195,199,203,204</sup></li><li>Increased deflection from underlying social, systemic or individual problems (3)<sup>28,193,194</sup></li><li>No meaningful benefit from diagnosis/ no change apart from label (10)<sup>70,80,195,197,199,200,205-208</sup></li></ul>

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
		Loss of control (15)	<ul style="list-style-type: none"> <li>• Diagnosis as first step to behaviour correction, control and manipulation by others (4)<sup>70,193,199,202</sup></li> <li>• Increased passiveness and hopelessness (3)<sup>194,195,200</sup></li> <li>• Self-fulfilling prophecy: perceived inability to change or achieve (by self or others) leads to exclusion and reduced opportunities (9)*<sup>34,194,196,209-214</sup></li> </ul>
	Stigmatisation (14) through	Permanent label/ identity (14)	<ul style="list-style-type: none"> <li>• Creates an identity which enhances prejudice, stereotypes, judgement (14)<sup>194-197,199,200,203,209,213,215-219</sup></li> <li>• Increases feelings of isolation, exclusion and shame (3)<sup>195,199,203</sup></li> </ul>
<b>Q5b Might harms outweigh benefits of treatment (n=120)</b>			
Outcomes of pharmacological treatment (120)	Academic (19)	Cognitive functioning (3)	<ul style="list-style-type: none"> <li>• Only improvements in commission errors, all other unchanged (1)<sup>220</sup></li> <li>• Positive impact on several aspects of cognition (1)<sup>221</sup></li> <li>• No effect after wash-out period (1)<sup>222</sup></li> </ul>
		Motor functioning (1)	<ul style="list-style-type: none"> <li>• Significant improvements in motor skills (1)<sup>223</sup></li> </ul>
		Academic performance (15)	<ul style="list-style-type: none"> <li>• Treated children have worse educational outcomes compared to the rest of the population (1)<sup>224</sup></li> <li>• No effect of treatment compared to untreated/ less treated youths with ADHD (3)<sup>225-227</sup></li> <li>• Small positive effect of treatment in some areas compared to untreated youths with ADHD (6)<sup>228-233</sup></li> <li>• Substantial improvement with treatment compared to untreated/ less treated youths (2)<sup>234,235</sup></li> <li>• Population level deterioration in academic outcomes per unit increase in ADHD score after increased uptake of medication treatment (1)<sup>236</sup></li> <li>• Potential harmful effect, especially in youths with less severe symptoms (1)*<sup>34</sup></li> <li>• Medication treatment only beneficial for youths with more severe symptoms (1)*<sup>211</sup></li> </ul>
	Accidents (12)	ED use/ Hospital admissions (5)	<ul style="list-style-type: none"> <li>• Fewer hospital contacts in treated vs untreated youths but effects are smaller in later, larger diagnosed and treated cohorts (1)*<sup>129</sup></li> </ul>

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
			<ul style="list-style-type: none"> <li>• No effect on hospital contacts during treated vs before treatment periods (1)<sup>237</sup></li> <li>• No difference in hospital contacts between ever treated vs never treated youths with ADHD (1)<sup>238</sup></li> <li>• But fewer contacts during treated vs untreated periods (2)<sup>238,239</sup></li> <li>• Treated children have worse health outcomes compared to the rest of the population (1)<sup>224</sup></li> </ul>
		Injuries (7)	<ul style="list-style-type: none"> <li>• Lower risk of injuries during treated vs untreated periods (3)<sup>239-241</sup> and in treated vs untreated youths (2)<sup>242,243</sup></li> <li>• No difference in injuries (1)<sup>244</sup> or motor vehicle accidents (1)<sup>245</sup> during treated vs untreated periods</li> </ul>
		Poisoning (1)	<ul style="list-style-type: none"> <li>• Significant increase in hospital admissions for unintentional poisoning with ADHD medication (1)<sup>246</sup></li> </ul>
	Cardiovascular (8)	Blood pressure/ Heart rate (2)	<ul style="list-style-type: none"> <li>• No effect of treatment on blood pressure (2)<sup>247,248</sup></li> <li>• Significant long-term effect of stimulant treatment on heart rate (1)<sup>247</sup></li> </ul>
		Safety (6)	<ul style="list-style-type: none"> <li>• No effect of treatment on severe cardiovascular events (3)<sup>249-251</sup></li> <li>• Increased risk of arrhythmia (1)<sup>252</sup> or of any cardiac event requiring hospitalisation (1)<sup>253</sup> with treatment</li> <li>• Potential for increased risk but not enough statistical power to detect small differences (3)<sup>249,250,254</sup></li> </ul>
	Efficacy (30)	Symptom reduction (30)	<ul style="list-style-type: none"> <li>• Significant short-term (&lt;12 months) symptom reduction in many youths with treatment (24)<sup>175,220,227,255-275</sup></li> <li>• No evidence of any symptom improvement after 48-hour wash-out period (1)<sup>222</sup></li> <li>• No difference in symptoms between regularly treated and untreated/irregularly treated ADHD youths in late adolescence/ early adulthood (3)<sup>225,276,277</sup></li> <li>• Subjects with more severe symptoms at baseline showed greatest treatment response in the long-term (5 years) (1)<sup>*278</sup></li> </ul>

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
	Physical (14)	Activity (2)	<ul style="list-style-type: none"> <li>Reduced levels of physical activity in medicated youths compared to unmedicated (1)<sup>279</sup> and in treated vs untreated periods (1)<sup>280</sup></li> </ul>
		Height (12)	<ul style="list-style-type: none"> <li>Growth delay observed with treatment (2)<sup>281,282</sup></li> <li>Decreased growth with treatment (6)<sup>276,283-287</sup></li> <li>No effect observed/ significant heterogeneity (4)<sup>248,279,288,289</sup></li> </ul>
		Weight (5)	<ul style="list-style-type: none"> <li>No effect observed (2)<sup>279,282</sup></li> <li>Reduction in weight in medicated youths (3)<sup>283,284,287</sup></li> </ul>
	Psychological (20)	Other (2)	<ul style="list-style-type: none"> <li>Increased risk of psychosis with amphetamine treatment (1)<sup>290</sup></li> <li>Significant increase in tics with current treatment vs never or previously treated (1)<sup>291</sup></li> </ul>
		Substance abuse (12)	<ul style="list-style-type: none"> <li>No effect of treatment on later substance abuse (4)<sup>292-295</sup></li> <li>Decreased risk of subsequent substance abuse in ever treated vs never treated youths (5)<sup>296-300</sup></li> <li>Increased risk of stimulant abuse in ever treated subjects vs never treated (1)<sup>301</sup></li> <li>Significant prescription stimulant misuse and diversion prevalence amongst youths with and without ADHD (2)<sup>302,303</sup></li> </ul>
		Suicidal behaviour (6)	<ul style="list-style-type: none"> <li>No effect of treatment on risk of suicidal behaviour (2)<sup>304,305</sup></li> <li>Reduced risk of suicidal behaviour during treatment periods compared to untreated period (2)<sup>306,307</sup> and in treated vs untreated youths (1)<sup>308</sup></li> <li>Increased risk of suicidal behaviour with treatment (1)<sup>309</sup></li> </ul>
	Social/ Emotional (11)	Emotional (3)	<ul style="list-style-type: none"> <li>Increased risk of irritability with amphetamine treatment (1)<sup>310</sup></li> <li>Mixed outcomes for various emotional behaviours with stimulant treatment (some increased, some decreased) (1)<sup>311</sup></li> <li>Population level deterioration in happiness per unit increase in ADHD score after increased uptake of medication treatment (1)<sup>236</sup></li> </ul>
		Criminal behaviour (3)	<ul style="list-style-type: none"> <li>Reduced risk of conviction and incarceration during treatment periods compared to periods without treatment (1)<sup>312</sup></li> </ul>

Type of evidence (n)	Theme (n)	Subtheme (n)	Main outcomes (n)
			<ul style="list-style-type: none"> <li>• No difference in risk of receiving driving citation for treated vs untreated periods (1)<sup>245</sup></li> <li>• Reduced risk of being charged with a crime in treated vs untreated youths but effects are smaller in later, larger diagnosed and treated cohorts (1)*<sup>129</sup></li> </ul>
		Social impairment (2)	<ul style="list-style-type: none"> <li>• No improvements in social impairment for most domains with treatment vs before treatment (1)<sup>226</sup></li> <li>• Potentially clinically relevant improvements in some domains with treatment vs placebo (1)<sup>313</sup></li> </ul>
		Quality of life (4)	<ul style="list-style-type: none"> <li>• Small short-term improvements in quality of life with treatment (3)<sup>313-315</sup></li> <li>• No effect detected (1)<sup>316</sup></li> </ul>
	Tolerability (29)	Adverse events (25)	<ul style="list-style-type: none"> <li>• Low occurrence of mild AEs (2)<sup>175,257</sup></li> <li>• Relatively common mild/moderate AEs (16)<sup>256,258,260,261,266,269,271,272,274,275,278,317-321</sup></li> <li>• Young children more vulnerable to AEs (2)<sup>275,322</sup></li> <li>• Reporting of AEs is unsatisfactory (6)<sup>262,271,274,323-325</sup></li> <li>• Serious AEs seem rare but difficult to determine from reported data (5)<sup>267,317,319,324,325</sup></li> <li>• Common AEs: Appetite suppression, insomnia, headaches, weight loss, abdominal pain, emotional symptoms, anxiousness, sleep disturbance, fatigue, dizziness, nausea</li> </ul>
		Discontinuation (6)	<ul style="list-style-type: none"> <li>• Moderate to high discontinuation rates (20-44%) (4)<sup>270,320,326,327</sup></li> <li>• Discontinuation similar to placebo group/ low quality evidence (2)<sup>255,265</sup></li> </ul>
	Various (8)	Mixed (8)	<ul style="list-style-type: none"> <li>• 50% of various outcomes reported some beneficial treatment effect (1)<sup>328</sup></li> <li>• Reduced risk of various outcomes (e.g. injuries, MVAs, academic difficulties, criminality, substance abuse, depression, seizures) (2)<sup>329,330</sup></li> <li>• Lack of methodologically sound research upon which to base decisions (1)<sup>331</sup></li> <li>• Longer treatment duration indicated better outcomes for various functionality and problem domains (1)<sup>332</sup></li> <li>• No long-term treatment effect for various functioning outcomes (e.g. academic achievement, social/ emotional skills, psychological problems) (3)<sup>333-335</sup></li> </ul>

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